



ABUNDANCE, AGE, SIZE, AND SEX COMPOSITION OF CHINOOK
SALMON (Oncorhynchus tshawytscha) CATCHES AND ESCAPEMENTS
IN SOUTHEASTERN ALASKA, 1982

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ADF&G TECHNICAL DATA REPORTS

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Data presented in these reports is intended to be final, however, some revisions may occasionally be necessary. Minor revisions will be made via errata sheets. Major revisions will be made in the form of revised reports.

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ABSTRACT

Catch statistics and escapement estimates are summarized for chinook salmon *Oncorhynchus tshawytscha* (Walbaum) in Southeastern Alaska, excluding Yakutat, for the 1982 season. Commercial troll, seine, and gillnet catches were apportioned by age and size based on available sample data. The age and size composition of chinook salmon harvested in the 1982 summer troll fishery is summarized by sampling period for four areas of Southeastern Alaska. Age, sex, and size data is also presented for escapements of chinook salmon sampled from 13 rivers in the region.

A total of 289,433 chinook salmon were commercially harvested in Southeastern Alaska, excluding catches in Districts 182, 183, 185, and 192 near Yakutat, during the 1981-82 winter troll fishery and the 1982 summer troll, seine, gillnet, and trap fisheries. The summer troll fishery harvest of 228,435 fish represents 78.9% of the total chinook salmon harvest in the region. Most chinook salmon were harvested in offshore waters. The chinook salmon commercial harvest by purse seine gear was 31,377 fish (10.8%), gillnet gear harvested 16,234 fish (5.6%). Sport fishermen in Southeastern Alaska harvested an estimated 25,358 chinook salmon. Small numbers of chinook salmon were also taken in the Canadian commercial gillnet fisheries on the Taku and Stikine Rivers (1,814 fish), in the four Annette Island Fishery Reserve fish traps (553 fish), and for subsistence use on the Chilkat and Stikine Rivers (633 fish).

There were differences in the age composition of chinook salmon harvested by each gear type, for the same gear type throughout the region, and through the season. Most of the chinook salmon harvested from the troll and seine fisheries were freshwater age 0., 55.4 and 79.2%, respectively, while only 15.5% of the fish sampled from the gillnet fisheries were age 0. The percent of age 0. chinook salmon in the summer troll fishery was highest in the outer coastal areas. Age 0.3 and 1.3 fish predominate in the troll fishery. The percent of age 0.2 and 1.2 fish in the summer troll fishery increased through time with recruitment into the fishery while the percent of age 1.3 and 1.4 fish decreased through time with their immigration toward the spawning grounds.

Age 1.4 and 1.3 fish predominate in samples from the Alaskan wild and hatchery returns. Based on age composition analysis, including Southeastern Alaska hatchery returns, a minimum estimate of 153,568 (55.6%) of the 276,046 chinook salmon harvested in the Southeastern Alaska summer troll, seine, and gillnet fisheries were of non-Alaskan origin.

KEY WORDS: catch allocation, age composition, chinook salmon, *Oncorhynchus tshawytscha*, fishery synopsis, Southeastern Alaska, catch and escapement.

INTRODUCTION

Chinook salmon (*Oncorhynchus tshawytscha* Walbaum) are harvested in commercial, sport, and subsistence fisheries in Southeastern Alaska, however, the majority are taken by the commercial power and hand troll fleets during the summer months. In 1982 the total number of chinook salmon harvested by gear type was; troll 241,269, seine 31,377, gillnet 16,234, and trap 553. Annual total chinook salmon sport catches in Southeastern Alaska have averaged an estimated 19,310 fish from 1977 to 1982 with the highest annual catch of 25,358 fish occurring in 1982. A small number of chinook salmon are harvested in subsistence fisheries on the Chilkat and Stikine Rivers. There are 33 documented chinook salmon producing systems in Southeastern Alaska, however the Stikine, Taku, and Alsek Rivers account for the majority of the production.

Commercial catches of chinook salmon by Southeastern Alaska fisheries have averaged approximately 320,000 fish annually during the 1970's and 1980's. During the 1930's the Southeastern Alaska chinook salmon harvest was approximately twice this, or 610,000 fish annually. Since 1980 the Southeastern Alaska chinook salmon commercial harvest has been managed to fall within a restrictive annual guideline harvest level as established by the Alaska Board of Fisheries and the North Pacific Fisheries Management Council. In 1982 the guideline harvest level was 255,000 with a range of 243,000 to 272,000 fish. This limit did not include an estimated 1,500 fish produced by Southeastern Alaska hatcheries. In 1982, the Southeastern Alaska chinook salmon catches comprised 33% of the total Alaskan chinook salmon catch. Historically, of the five species of salmon harvested commercially in Southeastern Alaska, chinook salmon are last in numerical importance, however, for the last several years chinook salmon have ranked third in terms of value to the fishermen. Virtually all the chinook salmon in Southeastern Alaska are sold in the dressed/frozen market.

The primary purpose of this report is to document the available data on catches, escapements, and age, sex, and size composition of chinook salmon in Southeastern Alaska for 1982, and to estimate the minimum number of non-Alaskan chinook salmon harvested in the 1982 Southeastern Alaska summer troll, seine, and gillnet fisheries based on age composition data.

All the Southeastern Alaska commercial fisheries harvest mixed stocks of chinook salmon originating from both Alaskan and non-Alaskan rivers. Based on coded wire tagging studies (Davis, Wood, and Hunn 1979; Funk 1981; Van Alen, Marshall, and Funk 1983), adult tagging studies (Parker and Kirkness 1956) and age composition and scale pattern analysis studies (Kissner 1973 and 1974; Van Alen and Marshall 1983) we know that the Southeastern Alaska troll and net fisheries harvest wild and hatchery runs of chinook salmon originating from Alaska, British Columbia, Washington, Oregon, Idaho, and California. Since virtually all chinook salmon returning to Alaskan rivers have one freshwater annuli (Kissner 1973; McBride and Wilcock 1983; Van Alen and Marshall 1983) fish with no freshwater annuli (age 0.)¹ in the harvest must be attributed to Alaskan hatchery production

¹ European notation - the number of freshwater annuli appears first, separated by a decimal point from the number of saltwater annuli. The actual age is the sum of the two numbers plus 1 year.

or to wild and hatchery runs of non-Alaskan origin. At present the Alaskan hatchery contribution of age 0. fish is negligible. In this report estimate of non-Alaskan contribution of chinook salmon to the 1982 summer troll, seine, and gillnet fisheries are made based on the criteria that all fish without a freshwater annuli are of non-Alaskan origin. These are minimum estimates because a proportion of fish with freshwater annuli are also of non-Alaskan origin. The relative proportion of fish with and without freshwater annuli is examined by fishery, area, and time.

STUDY AREA AND CONDUCT OF FISHERIES

The study area consists of coastal waters and inland drainages from Dixon Entrance on the South to Cape Suckling in the North (Figure 1), with the exception of Yakutat area inshore Districts 182, 183, 185, and 192 (see McBride 1983). The area is divided into sixteen coastal Districts (101 through 116) and five off-shore Districts (152, 154, 157, 181, and 189).

Chinook salmon were harvested commercially by troll gear in all districts, by seine gear in Districts 101 to 105, 107, and 109 to 114, and by gillnet gear in Districts 101, 106, 108, 111, and 115. Chinook salmon were also harvested commercially in fish traps fished in the Annette Island Fishery Reserve and in Canadian gillnet fisheries on the Taku and Stikine Rivers. Sport harvest of chinook salmon occurred throughout the region, primarily near the major population centers. A small number of chinook salmon were harvested for subsistence purposes on the Chilkat and Stikine Rivers. The winter commercial trolling season was from 1 October 1981 to 14 April 1982, the summer season was conducted from 15 May to 6 June and from 17 June to 28 July 1982. The 1982 seine fishery occurred between 4 July and 30 October and the gillnet fishery occurred between 13 June and 23 October.

During the 1982 winter fishery only those areas of Southeastern Alaska lying East of the surf line were open. The 1982 summer troll fishery began on 15 May with a 23-day fishing period. Following a 10-day closure from 7 June to 16 June the fishery was reopened on 17 June and continued for 42 days through 28 July when the fishery was again closed. When the troll fishery reopened from 8 August to 20 August the harvesting of chinook salmon was prohibited. The 7 to 16 June troll closure was intended to enhance the coastwide escapements of depressed natural chinook salmon stocks. This effort was complimented by a 10 to 23 June closure of the Canadian troll fishery in northern British Columbia.

Certain time and area restrictions were in effect for the 1982 summer troll fishery. Portions of District 101 (upper Behm Canal), District 108, District 111 (Gastineau Channel), and District 115 (Berners Bay) were closed to trolling for the season. There were delayed openings in some inside areas of Districts 101, 106, 108, 111, and 115. The northern portion of District 112 (Chatham Strait) and inside portion of District 114 (Icy Strait) was managed on an 8 days open, 6 days closed basis starting 15 June.

Troll fishery harvest and age and size composition data in this report is divided into four main areas (see Figure 1); Northern Outside (Districts 113, 114, 116, 154, 157, 181, 189), Southern Outside (Districts 103, 104, 152), Northern Inside

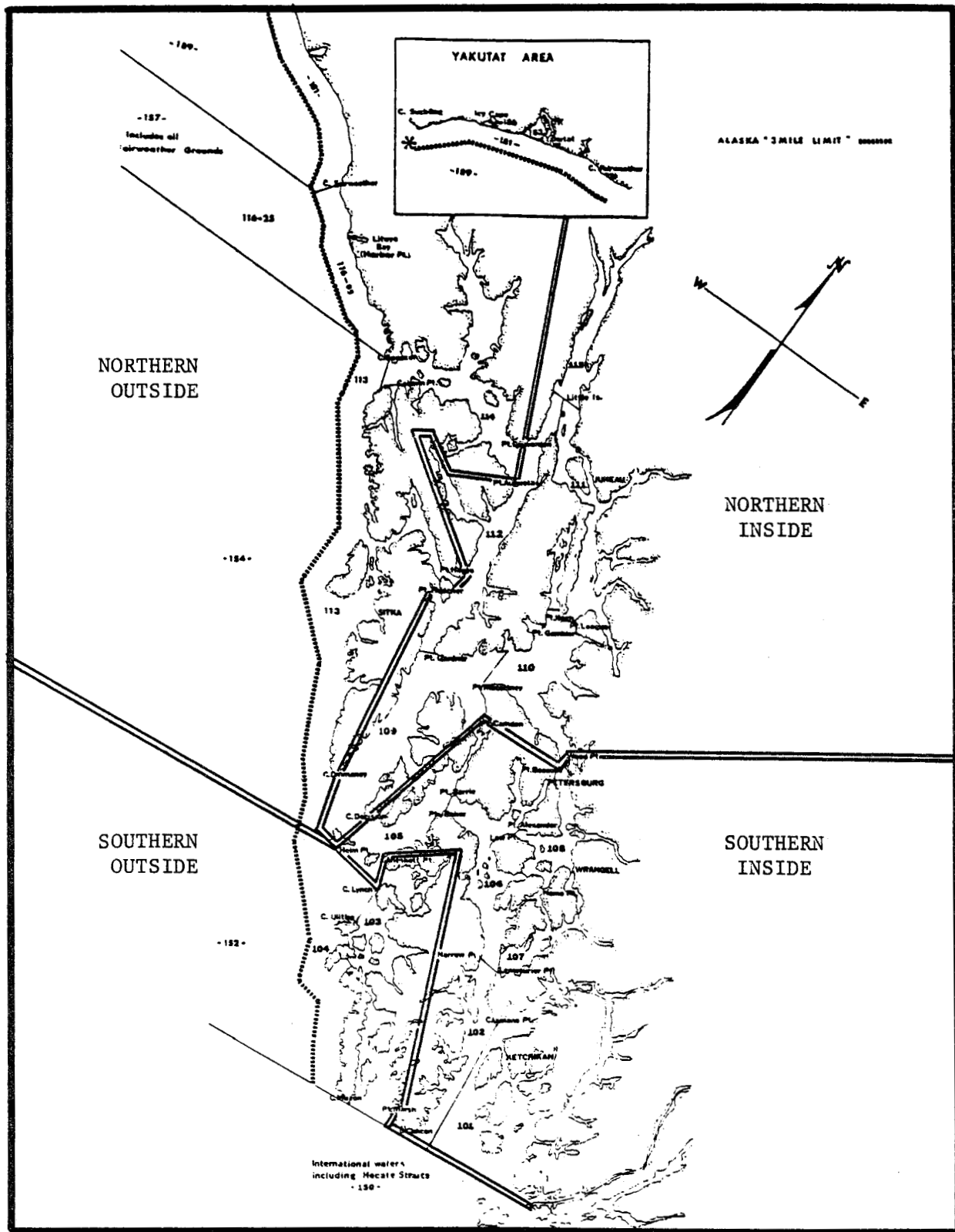


Figure 1. Map of Southeastern Alaska showing the statistical fishing districts and four areas used for analysis of the troll data.

(Districts 109, 110, 111, 112, 115), and Southern Inside (Districts 101, 102, 105, 106, 107, 108). The troll fishery catch and sample data was analyzed by these four areas for three reasons: (1) to maximize the accuracy of our sample data by pooling Districts together while still enabling analysis by area and time; (2) to maximize the use of mixed District samples and improve the accuracy of the fish ticket data by combining catches which frequently came from more than one District, i.e., Districts 113, 114, and 116, Districts 103 and 104, and Districts 101 and 102; and, (3) to enable direct comparison of stock composition estimates based on age composition analysis and coded wire tag analysis (Van Alen, Marshall, and Funk 1983).

METHODS

Abundance Data

Catch statistics for Alaskan's commercial fleets was obtained from computerized summaries of sales slips. Minor differences may exist between our figures and subsequent summaries as imbedded errors in the data were found and corrected. Catch data for the Canadian commercial and food fishery (subsistence) harvests on the Taku and Stikine Rivers were obtained from the Canadian Department of Fisheries and Oceans (Fast, personal communication). Sport harvest information was obtained from Mills (1983).

Escapement estimates used in this report were tabulated by Dangel (ADF&G, Sitka) based on escapement survey forms completed by the various sampling agencies. Escapement estimates were obtained in 1982 from seven weired rivers and 63 rivers surveyed by air, foot, or boat. Escapement counts for returns to Situk and Alsek Rivers near Yakutat were included since these runs were believed to contribute to the offshore troll fishery (ADF&G 1982). See McBride (1983) for additional Yakutat area catch and escapement data for 1982. The escapement estimates obtained from the non-weired systems do not represent a total enumeration of chinook salmon abundance.

The total natural run escapement to nine "index" river systems was estimated by expanding survey counts by the estimated aerial counting rates and for tributaries not surveyed. The total escapement to all systems was estimated by expanding the total escapement estimate for all index rivers within each of three categories (major, medium, or minor producers) by the number of rivers in that category. The expansion factors used in this report are those presented in ADF&G (1982). We do not consider these estimates to be precise, however, they are useful in assessing the interannual variability and distribution of the runs.

Age, Sex, and Size Data

Sampling of the 1982 summer commercial chinook salmon troll catch was conducted to accurately describe the age composition of the harvest by the four Southeastern Alaska areas, Northern Outside, Southern Outside, Northern Inside, and Southern Inside. When sample sizes permitted, the data was stratified over time into sampling periods containing 601 or more scales which could be aged. The minimum desired sample sizes for age composition of 601 per stratum were based on achievement of desired accuracy of $\pm 0.5\%$ with a precision of 0.10 based on a seven age class population (Bernard 1982). We present the finest temporal and spatial stratification within gear type as available samples permit.

Difficulties were encountered in random sampling of chinook salmon from the commercial catch. Most fish were sampled at fish processing facilities after they were graded into separate totes by flesh color, size, and quality. Unless the entire delivery was sampled there is a possibility that fish were not sampled from each tote in the same proportion that they represented in the catch. All samplers were aware of this possible source of bias and instructed to sample as randomly as possible. If fish of all grades were not available they were instructed not to sample that delivery.

An attempt was made to sample chinook salmon harvested through time from each of the seine and gillnet fisheries. However, low catches and availability of samples necessitated pooling so as to produce a single estimate for each of these fisheries.

Three scales were sampled from the preferred area (INPFC 1963) from each fish. Scales were mounted on gum cards and impressions made in cellulose acetate (Clutter and Whitesel 1956). Lengths were measured from the middle of the eye to the fork of the tail and recorded to the nearest millimeter. Sex was determined for chinook salmon sampled in the escapements by examination of external morphological characteristics. Sex determination was not made for the chinook salmon in the catch because external sexual traits were not present and most fish had been gutted.

Sample age composition for a strata were applied to catch data in that period and summarized to estimate the total harvest by age for each fishery. Length by age class was computed only from the samples obtained and was not weighted by abundance.

We used criteria for determining ages similar to that of Koo and Isarankura (1967). The prioritized criteria for interpreting the scale as a fish which had gone to sea in the first year (age 0.) was: (1) that the distance and spacing between circuli in the second ocean summer growth zone are greater than the distance and spacing between circuli in the first ocean summer growth zone; (2) that the distance between the first and second ocean annuli is greater than the distance between the first ocean annuli and the scale focus; and (3) that there is no visible freshwater zone annuli as depicted by narrowed, broken, and braided circuli in the freshwater zone.

The criteria for concluding that the scale had come from a fish which had gone to sea in second or third year (age 1. or 2.) was: (1) that the distance and spacing of summer ocean zone circuli on either side of the first ocean annuli are approximately equal; (2) that the distance between the first and second ocean circuli is equal to or less than the distance between the first ocean annuli and the scale focus (this measurement usually falls on the freshwater annuli); and (3) that there is one or more visible freshwater annuli.

RESULTS

Harvest Data

Commercial catch data is presented for Southeastern Alaska troll, seine, gillnet, and trap fisheries, and for the Canadian commercial gillnet fisheries in the Taku

and Stikine Rivers. Commercial catches of chinook salmon are reported by district and week.

Numbers of Fish:

A total of 289,433 chinook salmon was harvested in Southeastern Alaska commercial fisheries in 1982, excluding Yakutat inshore Districts 182, 183, 185, and 192 (Table 1). The majority of commercially caught chinook salmon were harvested by troll gear (83.4%) with smaller catches by seine (10.8%), gillnet (5.6%), and trap (0.2%) gear. The Canadian in-river commercial gillnet fisheries on the Taku and Stikine Rivers reported catches of 45 and 1,769 chinook salmon, respectively. Subsistence harvests of 618 fish in the upper Stikine Indian food fishery and 15 fish in the Chilkat River were reported. A total of 25,358 chinook salmon was harvested by Southeastern Alaska sport fishermen.

Troll Catch. The total chinook salmon harvest by hand and power troll gear in Southeastern Alaska was 241,269 fish. The winter troll fishery harvested 12,834 (5%) of these (Tables 1 and 2) and the summer troll fishery harvested 228,435 or 95% (Tables 1 and 3).

The winter power troll harvest was 9,629 fish (Table 4) and the winter hand troll harvest was 3,205 fish (Table 5). Most of the chinook salmon harvested in the winter fishery by the power trollers were caught in Districts 113, 110, and 103. The hand trollers harvested most of their fish in District 114.

The summer power and hand troll harvests of chinook salmon were 195,184 and 33,251 fish, respectively (Tables 6 and 7). Most of the chinook salmon harvested in the 1982 summer power troll fishery were caught in outer coastal waters (Districts 113, 104, 157, 189, and 116). The District 113 harvest alone accounted for 40% of the summer power troll harvest. The hand troll catches of chinook salmon during the summer troll fishery were highest in Districts 103 (5,647 fish), 113 (5,533 fish), 109 (4,884 fish), and 114 (4,651 fish). Summer hand troll catches were also greater than 2,000 fish in Districts 102, 110, and 112. The weekly power and hand troll catches averaged approximately 19,000 and 3,000 fish per week, respectively for the 10 weeks that continuous fishing was allowed.

Most of the 228,435 chinook salmon harvested in the summer troll fishery were harvested in the outside areas; 140,656 (61.6%) were harvested in the Northern Outside area and 38,382 (16.8%) were harvested in the Southern Outside area compared to 25,005 (10.9%) and 24,392 (10.7%) harvested in the Southern and Northern Inside areas, respectively.

Seine Catch. The 1982 season chinook salmon purse seine catch for Southeastern Alaska was 31,377 fish (Table 8). Most of these chinook salmon (21,478, 68.4%) were harvested in District 104, the Noyes Island fishery. This catch was the highest ever reported, and was 3.8 times larger than the 1970 to 1981 average of 8,237 fish. High catches of chinook salmon in the seine fishery occurred between 1 August and 11 September.

Gillnet Catch. A total of 16,234 chinook salmon were harvested in the 1982 Southeastern Alaska drift gillnet fisheries (Table 9). Most of these chinook salmon were harvested in Districts 115 (Lynn Canal); 5,945; District 101 (Tree Point),

Table 1. Commercial troll, seine, gillnet, and trap harvest of chinook salmon in Southeastern Alaska, 1982.

District	Fishery					Total
	Winter ¹ Troll	Summer ² Troll	Seine	Gillnet	Trap	
101	749	5,361	1,935	4,546	553	13,144
102	158	11,014	3,907			15,079
103	1,260	13,090	393			14,743
104	650	20,429	21,478			42,557
105	531	3,059	1			3,591
106	846	2,165		1,672		4,683
107	724	3,185	18			3,927
108	312	221		1,014		1,547
109	519	13,208	691			14,418
110	1,536	7,188	1,473			10,197
111	5	578	306	3,057		3,946
112	83	3,232	1,039			4,354
113	3,005	84,283	130			87,418
114	2,456	13,729	6			16,191
115		186		5,945		6,131
116		9,688				9,688
152		4,863				4,863
154		4,027				4,027
157		12,763				12,763
181		4,172				4,172
189		11,994				11,994
Total	12,834	228,435	31,377	16,234	553	289,433
Percent	4.4	78.9	10.8	5.6	0.2	100.00

¹ Winter fishery harvests from 1 October 1981 to 14 April 1982.

² Summer fishery harvests from 15 May to 28 July 1982.

Table 2. Commercial hand and power troll harvest of chinook salmon in South-eastern Alaska by district and week for the winter fishery, 1 October 1981 to 14 April 1982.

Week	District															Total
	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	
10/1-10/3	4	0	0	0	0	0	0	0	0	9	0	8	0	57	0	78
10/4-10/10	78	11	0	0	0	2	316	35	29	125	0	13	10	266	0	885
10/11-10/1	222	41	0	0	11	16	26	20	3	414	0	0	23	78	0	854
10/18-10/2	9	0	0	0	0	45	90	19	75	58	0	5	8	257	0	566
10/25-10/3	116	4	5	0	0	51	3	16	16	322	0	7	6	225	0	771
11/1-11/7	2	0	0	0	0	22	55	2	0	14	0	12	12	29	0	148
11/8-11/14	85	0	26	0	0	13	23	21	3	26	0	0	22	51	0	270
11/15-11/2	0	0	46	6	0	2	77	92	3	20	0	0	67	54	0	367
11/22-11/2	4	0	0	15	48	0	36	8	0	45	0	0	4	49	0	209
11/29-12/5	26	0	18	0	0	1	14	9	8	14	0	0	9	82	0	181
12/6-12/12	47	0	29	0	10	1	51	38	1	2	5	0	2	57	0	243
12/13-12/1	5	0	13	0	16	0	26	2	0	12	0	0	14	12	0	100
12/20-12/2	0	0	26	0	1	0	5	1	0	1	0	0	0	74	0	108
12/27-12/3	3	0	42	0	0	1	0	18	0	0	0	0	2	8	0	74
0/0-0/0 ¹	0	0	0	0	0	0	0	0	3	0	0	0	194	106	0	303
1/1-1/2	0	0	0	0	0	5	0	0	0	4	0	0	0	0	0	9
1/3-1/9	0	0	16	0	2	0	0	6	0	0	0	0	10	7	0	41
1/10-1/16	9	0	6	0	0	1	0	0	0	0	0	0	0	11	0	27
1/17-1/23	0	0	6	0	0	11	0	0	0	0	0	0	10	3	0	30
1/24-1/30	0	5	67	0	0	1	0	0	0	0	0	0	10	0	0	83
1/31-2/6	21	0	19	43	0	0	0	7	0	0	0	0	47	32	0	169
2/7-2/13	0	10	78	118	0	39	0	2	18	15	0	0	85	6	0	371
2/14-2/20	13	27	42	0	0	5	0	0	0	0	0	0	81	15	0	183
2/20-2/27	6	14	9	0	4	9	0	11	0	4	0	0	5	11	0	73
2/28-3/6	7	10	39	6	40	6	0	0	17	0	0	0	44	34	0	203
3/7-3/13	8	0	77	33	37	75	0	0	47	5	0	0	114	16	0	412
3/14-3/20	5	4	284	56	46	22	0	0	66	12	0	0	214	29	0	738
3/20-3/27	5	4	32	10	119	113	0	0	136	106	0	2	308	118	0	953
3/28-4/3	35	0	88	4	70	115	0	0	3	88	0	4	405	192	0	1,004
4/4-4/10	31	28	197	248	65	51	0	0	32	65	0	23	628	204	0	1,572
4/11-4/15	8	0	95	111	62	239	2	5	59	175	0	9	671	373	0	1,809
Total	749	158	1,260	650	531	846	724	312	519	1,536	5	83	3,005	2,456	0	12,834

¹ Unspecified date.

Table 3. Commercial hand and power troll harvest of chinook salmon in Southeastern Alaska by district and week for the summer fishery, 15 May to 28 July 1982.

Week	Districts																					Total
	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	152	154	157	181	189	
5/9-5/15	0	1	27	103	0	0	0	0	0	0	0	4	182	41	0	0	0	7	0	0	0	365
5/16-5/22	0	117	654	2,762	53	18	77	6	369	138	10	62	2,827	579	0	532	647	203	274	328	942	10,598
5/23-5/29	56	552	369	3,231	390	0	504	4	949	941	0	148	5,873	1,665	0	919	504	266	197	679	2,222	19,469
5/30-6	42	1,079	1,486	1,837	420	84	581	0	976	430	0	172	9,156	2,484	59	360	352	474	700	661	1,608	22,961
6/6-6/12	396	1,528	1,756	1,964	131	242	825	0	1,039	1,124	0	93	6,801	1,458	0	2,156	60	155	6,498	1,279	3,417	30,922
6/13-6/19	49	123	222	642	94	3	70	182	439	160	0	254	1,357	504	0	202	306	62	4	0	0	4,673
6/20-6/26	970	1,692	2,312	2,919	728	538	536	2	1,583	1,644	273	496	11,731	1,611	11	1,298	574	586	2,677	497	803	33,481
6/27-7/3	496	1,886	2,125	2,083	255	123	306	14	2,108	451	96	409	9,313	1,215	13	1,246	515	436	1,061	553	293	24,997
7/4-7/10	323	979	1,021	1,573	214	65	101	13	1,463	664	0	361	6,681	1,002	11	188	359	573	288	92	602	16,573
7/11-7/17	907	834	1,287	1,471	272	135	110	0	1,634	421	100	541	10,835	1,166	33	1,164	603	141	192	14	1,145	23,005
7/18-7/24	510	1,181	1,048	977	175	395	46	0	1,341	514	39	415	9,290	1,007	14	459	581	800	23	69	339	19,223
7/25-7/28	1,612	1,042	783	867	327	562	29	0	1,307	701	60	277	10,237	997	45	1,164	362	324	849	0	623	22,168
Total	5,361	11,014	13,090	20,429	3,059	2,165	3,185	221	13,208	7,188	578	3,232	84,283	13,729	186	9,688	4,863	4,027	12,763	4,172	11,994	228,435

Table 4. Commercial power troll harvest of chinook salmon in Southeastern Alaska by district and week for the winter fishery, 1 October 1981 to 14 April 1982.

Week	District															Total
	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	
10/1-10/3	4	0	0	0	0	0	0	0	0	4	0	8	0	14	0	30
10/4-10/10	78	11	0	0	0	0	263	32	0	115	0	13	7	86	0	605
10/11-10/17	219	41	0	0	11	7	25	9	0	414	0	0	23	18	0	767
10/18-10/24	9	0	0	0	0	4	64	4	15	58	0	5	8	58	0	225
10/25-10/31	115	0	5	0	0	35	3	5	8	291	0	0	6	62	0	530
11/1-11/7	2	0	0	0	0	9	17	0	0	0	0	12	12	0	0	52
11/8-11/14	85	0	26	0	0	13	23	0	0	11	0	0	22	28	0	208
11/15-11/21	0	0	46	6	0	0	51	74	0	10	0	0	67	15	0	269
11/22-11/28	4	0	0	15	48	0	31	7	0	22	0	0	4	0	0	131
11/29-12/5	26	0	18	0	0	0	0	0	6	2	0	0	6	0	0	58
12/6-12/12	47	0	20	0	0	0	40	26	1	0	5	0	2	0	0	141
12/13-12/19	5	0	13	0	0	0	11	2	0	9	0	0	14	0	0	54
12/20-12/26	0	0	26	0	1	0	0	0	0	0	0	0	0	0	0	27
12/27-12/31	3	0	42	0	0	0	0	6	0	0	0	0	2	0	0	53
0/0-0/0	0	0	0	0	0	0	0	0	0	0	0	0	194	106	0	300
1/1-1/2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/3-1/9	0	0	16	0	2	0	0	0	0	0	0	0	10	0	0	28
1/10-1/16	9	0	6	0	0	0	0	0	0	0	0	0	0	0	0	15
1/17-1/23	0	0	6	0	0	11	0	0	0	0	0	0	10	0	0	27
1/24-1/30	0	5	67	0	0	0	0	0	0	0	0	0	10	0	0	82
1/31-2/6	21	0	19	43	0	0	0	5	0	0	0	0	46	0	0	134
2/7-2/13	0	10	66	118	0	15	0	0	0	0	0	0	85	0	0	294
2/14-2/20	13	27	42	0	0	0	0	0	0	0	0	0	81	0	0	163
2/20-2/27	6	14	9	0	0	3	0	11	0	0	0	0	5	0	0	48
2/28-3/	5	10	39	6	40	4	0	0	17	0	0	0	38	7	0	166
3/7-3/13	6	0	66	33	9	30	0	0	35	3	0	0	113	0	0	295
3/14-3/20	5	4	251	56	30	16	0	0	66	7	0	0	207	8	0	650
3/20-3/27	2	0	32	10	78	109	0	0	136	50	0	2	293	21	0	733
3/28-4/3	33	0	58	0	61	95	0	0	0	37	0	4	374	56	0	718
4/4-4/10	31	28	197	248	41	46	0	0	29	45	0	8	565	58	0	1,296
4/11-4/15	8	0	63	111	62	225	0	5	54	136	0	7	645	214	0	1,530
Total	736	150	1,133	646	383	622	528	186	367	1,214	5	59	2,849	751	0	9,629

Table 5. Commercial hand troll harvest of chinook salmon in Southeastern Alaska by district and week for the winter fishery, 1 October 1981 to 14 April 1982.

Week	District															Total
	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	
10/1-10/3	0	0	0	0	0	0	0	0	0	5	0	0	0	43	0	48
10/4-10/10	0	0	0	0	0	2	53	3	29	10	0	0	3	180	0	280
10/11-10/17	3	0	0	0	0	9	1	11	3	0	0	0	0	60	0	87
10/18-10/24	0	0	0	0	0	41	26	15	60	0	0	0	0	199	0	341
10/25-10/31	1	4	0	0	0	16	0	11	8	31	0	7	0	163	0	241
11/1-11/7	0	0	0	0	0	13	38	2	0	14	0	0	0	29	0	96
11/8-11/14	0	0	0	0	0	0	0	21	3	15	0	0	0	23	0	62
11/15-11/21	0	0	0	0	0	2	26	18	3	10	0	0	0	39	0	98
11/22-11/28	0	0	0	0	0	0	5	1	0	23	0	0	0	49	0	78
11/29-12/5	0	0	0	0	0	1	14	9	2	12	0	0	3	82	0	123
12/6-12/12	0	0	9	0	10	1	11	12	0	2	0	0	0	57	0	102
12/13-12/19	0	0	0	0	16	0	15	0	0	3	0	0	0	12	0	46
12/20-12/26	0	0	0	0	0	0	5	1	0	1	0	0	0	74	0	81
12/27-12/31	0	0	0	0	0	1	0	12	0	0	0	0	0	8	0	21
0/0-0/0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
1/1-1/2	0	0	0	0	0	5	0	0	0	4	0	0	0	0	0	9
1/3-1/9	0	0	0	0	0	0	0	6	0	0	0	0	0	7	0	13
1/10-1/16	0	0	0	0	0	1	0	0	0	0	0	0	0	11	0	12
1/17-1/23	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
1/24-1/30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
1/31-2/6	0	0	0	0	0	0	0	2	0	0	0	0	1	32	0	35
2/7-2/13	0	0	12	0	0	24	0	2	18	15	0	0	0	6	0	77
2/14-2/20	0	0	0	0	0	5	0	0	0	0	0	0	0	15	0	20
2/21-2/27	0	0	0	0	4	6	0	0	0	4	0	0	0	11	0	25
2/28-3/6	2	0	0	0	0	2	0	0	0	0	0	0	6	27	0	37
3/7-3/13	2	0	11	0	28	45	0	0	12	2	0	0	1	16	0	117
3/14-3/20	0	0	33	0	16	6	0	0	0	5	0	0	7	21	0	88
3/21-3/27	3	4	0	0	41	4	0	0	0	56	0	0	15	97	0	220
3/27-4/3	2	0	30	4	9	20	0	0	3	51	0	0	31	136	0	286
4/4-4/10	0	0	0	0	24	5	0	0	3	20	0	15	63	146	0	276
4/11-4/15	0	0	32	0	0	14	2	0	5	39	0	2	26	159	0	279
Total	13	8	127	4	148	224	196	126	152	322	0	24	156	1,705	0	3,205

Table 6. Commercial power troll harvest of chinook salmon in Southeastern Alaska by district and week for the summer fishery, 15 May to 28 July 1982.

Week	Districts																				Total	
	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	152	154	157	181		189
5/9-5/15	0	0	21	97	0	0	0	0	0	0	0	0	89	0	0	0	0	7	0	0	0	214
5/16-5/22	0	50	561	2,730	5	1	0	6	316	51	10	15	2,540	463	0	495	640	151	274	328	942	9,578
5/23-5/29	48	526	225	3,072	268	0	365	4	752	695	0	49	5,275	1,045	0	919	463	266	197	679	2,222	17,070
5/30-6/5	37	762	904	1,764	285	56	367	0	635	222	0	48	8,127	1,919	59	360	319	413	700	661	1,608	19,246
6/6-6/12	395	1,163	1,308	1,908	106	210	638	0	839	811	0	35	6,619	1,229	0	2,156	59	155	6,498	1,279	3,417	28,825
6/13-6/19	0	9	89	570	47	0	37	182	148	32	0	31	1,030	281	0	202	235	62	4	0	0	2,959
6/20-6/26	905	1,432	1,115	2,755	572	462	345	0	988	1,098	262	64	10,965	806	0	1,215	437	586	2,677	497	803	27,984
6/27-7/3	397	1,605	1,072	1,986	185	98	143	7	1,321	285	13	128	8,747	745	0	1,246	383	432	1,061	553	293	20,700
7/4-7/10	246	886	521	1,531	192	27	47	0	1,021	454	0	63	6,358	600	0	173	272	562	288	92	602	13,935
7/11-7/17	801	708	723	1,400	227	106	74	0	867	207	47	238	10,391	810	32	1,149	453	126	192	14	1,145	19,710
7/18-7/24	374	995	480	929	134	362	33	0	782	299	37	108	8,751	510	13	437	480	714	21	69	339	15,867
7/25-7/28	1,377	783	424	796	264	464	4	0	655	477	13	66	9,858	670	36	1,160	275	304	847	0	623	19,096
Total	4,580	8,919	7,443	19,538	2,285	1,786	2,053	199	8,324	4,631	382	845	78,750	9,078	140	9,512	4,016	3,778	12,759	4,172	11,994	195,184

Table 7. Commercial hand troll harvest of chinook salmon in Southeastern Alaska by district and week for the summer fishery, 15 May to 28 July 1982.

Week	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	152	154	157	Total
5/9-5/15	0	1	6	6	0	0	0	0	0	0	0	4	93	41	0	0	0	0	0	151
5/16-5/22	0	67	93	32	48	17	77	0	53	87	0	47	287	116	0	37	7	52	0	1.020
5/23-5/29	8	26	144	159	122	0	139	0	197	246	0	99	598	620	0	0	41	0	0	2.399
5/30-6/5	5	317	582	73	135	28	214	0	341	208	0	124	1,029	565	0	0	33	61	0	3.715
6/6-6/12	1	365	448	56	25	32	187	0	200	313	0	58	182	229	0	0	1	0	0	2.097
6/13-6/19	49	114	133	72	47	3	33	0	291	128	0	223	327	223	0	0	71	0	0	1.714
6/20-6/26	65	260	1,197	164	156	76	191	2	595	546	11	432	766	805	11	83	137	0	0	5.497
6/27-7/3	99	281	1,053	97	70	25	163	7	787	166	83	281	566	470	13	0	132	4	0	4.297
7/4-7/10	77	93	500	42	22	38	54	13	442	210	0	298	323	402	11	15	87	11	0	2.638
7/11-7/17	106	126	564	71	45	29	36	0	767	214	53	303	444	356	1	15	150	15	0	3.295
7/18-7/24	136	186	568	48	41	33	13	0	559	215	2	307	539	497	1	22	101	86	2	3.356
7/25-7/28	235	259	359	71	63	98	25	0	652	224	47	211	379	327	9	4	87	20	2	3.072
Total	781	2,095	5,647	891	774	379	1,132	22	4,884	2,557	196	2,387	5,533	4,651	46	176	847	249	4	33.251

Table 8. Commercial purse seine harvest of chinook salmon in Southeastern Alaska by district and week, 27 June to 16 October 1982.

Week	Districts												Total
	101	102	103	104	105	107	109	110	111	112	113	114	
6/27-7/3	0	0	0	16	0	0	0	0	0	0	0	0	16
7/4-7/10	378	0	0	1,758	0	0	0	0	0	0	0	0	2,136
7/11-7/17	550	99	0	1,071	0	0	0	0	0	117	0	0	1,837
7/18-7/24	226	347	0	1,063	0	0	0	0	0	264	47	0	1,947
7/25-7/31	59	106	0	459	0	0	0	0	0	228	0	0	852
8/1-8/7	144	537	0	2,429	0	0	492	774	298	215	0	0	4,889
8/8-8/14	236	721	0	6,574	0	0	140	487	8	89	22	0	8,277
8/15-8/21	177	1,391	46	4,201	0	18	48	162	0	90	16	0	6,149
8/22-8/28	116	557	240	2,673	0	0	6	50	0	29	40	3	3,714
8/29-9/4	46	137	96	995	1	0	5	0	0	6	5	3	1,294
9/5-9/11	3	6	11	239	0	0	0	0	0	1	0	0	260
9/12-9/18	0	0	0	0	0	0	0	0	0	0	0	0	0
9/19-9/25	0	0	0	0	0	0	0	0	0	0	0	0	0
9/26-10/2	0	1	0	0	0	0	0	0	0	0	0	0	1
10/3-10/9	0	4	0	0	0	0	0	0	0	0	0	0	4
10/10-10/16	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	1,935	3,907	393	21,478	1	18	691	1,473	306	1,039	130	6	31,377

Table 9. Commercial gillnet harvest of chinook salmon in Southeastern Alaska by district and week, 6 June to 23 October 1982.

Week	District					Total
	101	106	108	111	115	
6/6-6/12	0	0	0	31	0	31
6/13-6/19	74	62	215	435	190	976
6/20-6/26	1,173	409	114	493	273	2,462
6/27-7/3	1,296	422	291	731	914	3,654
7/4-7/10	315	415	94	215	424	1,463
7/11-7/17	806	94	0	562	247	1,709
7/18-7/24	107	24	0	100	827	1,058
7/25-7/31	157	58	0	87	835	1,137
8/1-8/7	73	0	0	133	1,370	1,576
8/8-8/14	16	0	42	69	234	361
8/15-8/21	29	19	58	44	183	333
8/22-8/28	29	43	42	44	166	324
8/29-9/4	9	55	48	61	44	217
9/5-9/11	10	51	92	26	32	211
9/12-9/18	452	20	18	26	30	546
9/19-9/25	0	0	0	0	20	20
9/26-10/2	0	0	0	0	23	23
10/3-10/9	0	0	0	0	120	120
10/10-10/16	0	0	0	0	9	9
10/17-10/23	0	0	0	0	4	4
Total	4,546	1,672	1,014	3,057	5,945	16,234

4,546; and District 111 (Taku Inlet), 3,057. High chinook salmon gillnet catches occurred between 20 June and 3 July. The actual number of chinook salmon harvested by the seine and gillnet fisheries is believed to be slightly higher since some chinook salmon less than 711 mm (28 in) in total length were sold as pink salmon (*O. gorbuscha*) and not all the chinook salmon that are caught are sold.

Trap Catch. The four fish traps operating in the Annette Island Fishery Reserve caught 553 chinook salmon (Table 10). Most of these chinook salmon (357, 64.6%) were caught during the period 4 to 17 July.

Sport Catch. The sport catch of chinook salmon in Southeastern Alaska was 25,358 fish with 18,686 estimated to be longer than 711 mm and 6,672 estimated to be shorter than 711 mm in total length (Table 11). The highest sport catches of chinook salmon occurred near the major population centers of Juneau, Ketchikan, and Petersburg/Wrangell. Sport fish harvest information was available only by regional area, not by district. Salmon derbies held in May and June in Haines, Petersburg, Wrangell, Sitka, and Ketchikan target directly on chinook salmon. The Haines salmon derby targets on mature chinook salmon bound for the Chilkat River, the Petersburg and Wrangell salmon derbies target on mature chinook salmon bound for the Stikine River, and the Ketchikan derby is believed to target on chinook salmon headed for the Stikine and Behm Canal systems (Jones, personal communication).

Canadian Transboundary River Catch. Canadian in-river commercial gillnet fisheries in the transboundary Taku and Stikine Rivers harvested 1,814 chinook salmon; 45 fish were harvested in the Taku River, 1,693 fish were harvested in the lower Stikine River, and 76 fish were harvested from the upper Stikine River (Table 12). In each of these fisheries, sockeye salmon (*O. keta*) predominate the catches with chinook salmon catches occurring during the first few weeks following the commencement of fishing.

Subsistence Catch. The only reported subsistence harvest of chinook salmon that occurred in Southeastern Alaska in 1982 was 15 fish by Klukwan residents in the Chilkat River set net fishery and 618 fish from the upper Stikine River Canadian food fishery (Table 12).

Age, Sex, and Size Data:

Information on the age and size composition of chinook salmon harvested in the Southeastern Alaska commercial fisheries is presented by area and period for the troll fishery and for the seine and gillnet fisheries. Age, sex, and size composition information is presented for the chinook salmon escapements for wild and hatchery runs sampled in Southeastern Alaska.

Troll. Of the 1,648 chinook salmon aged from the winter troll fishery 990 (60.1%) were age 0. (fall chinooks) and 651 (39.5%) were age 1. or age 2. (spring chinooks). Most of the chinook salmon sampled were age 0.3 (45.6%) followed by age 1.3 at 25.8% (Table 13). The Southern Outside area had the highest proportion of age 0. chinook salmon (67.4%) and the Southern Inside area had the lowest proportion (41.2%).

Table 10. Commercial trap harvest of chinook salmon on the Metlakatla Indian Fishery Reserve in Southeastern Alaska by district and week from 27 June to 11 September 1982.

Week	Catch
6/27-7/3	40
7/4-7/10	233
7/11-7/17	124
7/18-7/24	64
7/25-7/31	59
8/1-8/7	16
8/8-8/14	15
8/17-8/21	0
8/22-8/28	0
8/29-9/4	2
9/5-9/11	0
Total	553

Table 11. Total sport harvest of chinook salmon in Southeastern Alaska, 1982.

Area	Estimated Harvest		Total
	>711 mm	≤711 mm	
Ketchikan	4,087	2,128	6,215
Prince of Wales Island	755	178	933
Petersburg-Wrangell	3,605	471	4,076
Sitka	1,362	419	1,781
Juneau	7,682	2,932	10,614
Haines-Skagway	1,048	544	1,592
Glacier Bay	147	0	147
Total	18,686	6,672	25,358

Table 12. Canadian commercial and subsistence harvest of chinook salmon from Taku and Stikine Rivers, 1982.

Week	Taku ¹ Commercial	Lower ¹ Stikine Commercial	Upper ¹ Stikine Commercial	Upper ² Stikine Subsistence	Total
June 13-June 19	- ³	119	0	0	119
June 20-June 26	-	291	22	0	313
June 27-July 3	30	449	0	181	660
July 4-July 10	15	555	54	142	766
July 11-July 17	0	173	0	153	326
July 18-July 24	0	70	0	68	138
July 25-July 31	0	9	0	17	26
Aug. 1-Aug. 7	-	9	0	46	55
Aug. 8-Aug. 14	-	12	0	11	23
Aug. 15-Aug. 21	-	3	-	-	3
Aug. 22-Aug. 28	-	1	-	-	1
Aug. 29-Sept. 4	-	1	-	-	1
Sept. 5-Sept. 11	-	0	-	-	0
Sept. 12-Sept. 18	-	0	-	-	0
Sept. 19-Sept. 25	-	1	-	-	1
Total	45	1,693	76	618	2,432

¹ Commercial gillnet fishery.

² Indian food fishery.

³ A "-" indicates no fishery occurred.

Table 13. Age composition of chinook salmon from the Southeastern Alaska winter troll fishery, 8 March to 14 April 1982.

Area	Brood Year and age Class												Total
	1979	1978		1977			1976			1975			
	0.2	0.3	1.2	0.4	1.3	2.2	0.5	1.4	2.3	0.6	1.5	2.4	
Northern Outside	4 0.6%	305 42.8%	10 1.4%	100 14.0%	197 27.6%	1 0.1%	5 0.7%	79 11.1%	4 0.6%	0 0.0%	8 1.1%	0 0.0%	713 100.0%
Southern Outside	5 2.3%	124 56.9%	11 5.0%	17 7.8%	51 23.4%	0 0.0%	1 0.5%	8 3.7%	0 0.0%	0 0.0%	1 0.5%	0 0.0%	218 100.0%
Northern Inside	8 1.4%	276 47.3%	18 3.1%	81 13.9%	123 21.1%	0 0.0%	8 1.4%	65 11.1%	0 0.0%	1 0.2%	2 0.3%	1 0.2%	583 100.0%
Southern Inside	0 0.0%	47 35.1%	14 10.4%	7 5.2%	55 41.0%	0 0.0%	1 0.7%	9 6.7%	1 0.7%	0 0.0%	0 0.0%	0 0.0%	134 100.0%
Total	17 1.0%	752 45.6%	53 3.2%	205 12.4%	426 25.8%	1 0.1%	15 0.9%	161 9.8%	5 0.3%	1 0.1%	11 0.7%	1 0.1%	1,648 100.0%

Of the 228,435 chinook salmon harvested in the summer troll fishery, 126,651 fish (55.4%) were age 0. and 101,784 fish (44.6%) were age 1. and age 2. (Table 14). Age 0.3 and age 1.3 were the dominant age classes comprising 34.4 and 22.3% of the harvest, respectively (Table 14).

Differences in the age composition of chinook salmon harvested in each of the four areas during the summer troll fishery was evident. In the Northern Outside area 62.7% of the harvest was age 0. and in the Southern Outside area 54.2% of the harvest was age 0. In contrast 39.2% of the Northern Inside fish harvest and 32.0% of the Southern Inside harvest was age 0.

Most of the chinook salmon harvested in the Northern Outside area were 4 years old (1978 brood) and 5 years old (1977 brood), 47 and 33% of the total harvest, respectively. The dominant age class of chinook salmon harvested in the Northern Outside area was age 0.3 (38.1%), followed by age 1.3 (19.3%), and age 0.4 at 13.8% (Table 15). Three ocean fish (.3) comprised 56.9% of the harvest, four ocean fish (.4) comprised 21.3%, and two ocean fish (.2) comprised 20.2%.

The majority of chinook salmon harvested in the Southern Outside area summer troll fishery (Table 16) were age 0.3 (34.5%) followed by age 1.3 (23.5%) and age 1.2 (13.2%). Four and five-year-old fish comprised most of the Southern Outside troll harvest, representing 49 and 33% of the harvest, respectively. The ocean age composition composition of chinook salmon harvested in the Southern Outside area was comprised of 57.8% three ocean, 25.1% two ocean, and 16.7% four ocean.

The majority of chinook salmon harvested in the Northern Inside summer troll fishery were age 1.3 (32.1%) followed by age 0.3 (28.0%), and 1.2 (15.7%) and age 1.4 at 11.0% (Table 17). Four-year-old and five-year-old fish accounted for 43.7% and 37.2%, respectively of the Northern Inside area troll harvest. The ocean age composition of chinook salmon harvested was comprised of 60.4% three ocean, 22.4% two ocean, and 15.8% four ocean fish.

The most prevalent age classes of chinook salmon harvested in the summer troll fishery from the Southern Inside area (Table 18) were; age 1.2 (31.6%), age 1.3 (27.8%), and age 0.3 (18.7%). Four and five-year-old fish comprised 50.6% and 31.5% of the harvest, respectively. The ocean age composition was comprised of 46.8% three ocean, 42.1% two ocean, and 10.2% four ocean.

There were changes in the age composition through time for the chinook salmon harvested in the summer troll fishery (Table 14). The percent of age 0.2 and 1.2 fish tended to increase through time. The percent of age 1.3 and 1.4 fish in the harvest decreased through the season. Age 1.4 fish showed the most noticeable seasonal drop in relative abundance from a high of 15.6% the first period to a low of 2.5% the last period. The percent of age 0.4 fish ranged from a low of 8% early and late in the season to a high of 16% during the middle of the season. The proportion of age 0.3 fish was relatively constant throughout the season, ranging between 32 and 35% for all periods.

The mean lengths and 95% confidence intervals for chinook salmon harvested in the summer troll fishery by sample period are presented for the four Southeastern Alaska area strata in Tables 19 to 22. No obvious geographic trends were

Table 14. Chinook salmon catch by brood year and age class in the commercial troll fishery in Southeastern Alaska by period, 15 May to 28 July 1982.

	Brood Year and Age Class																	
	1980		1979		1978			1977			1976			1975		1974		
Period	0.1	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	0.5	1.4	2.3	3.2	1.5	2.4	1.6	Total	
May 15-May 29																		
Sample number	0	41	0	490	123	0	133	489	4	6	279	3	0	11	1	0	1,580	
Percent	0.01	3.76	0.00	32.18	9.37	0.00	8.49	29.01	0.39	0.41	15.64	0.21	0.00	0.50	0.03	0.00	100.00	
Number	3	1,143	0	9,793	2,852	0	2,584	8,829	118	125	4,759	63	0	153	10	0	30,432	
May 30-June 5																		
Sample Number	0	94	0	553	184	0	166	523	9	10	205	5	0	11	1	0	1,761	
Percent	0.01	4.99	0.00	31.98	9.37	0.00	10.43	29.20	0.34	0.64	12.15	0.27	0.00	0.59	0.03	0.00	100.00	
Number	3	1,145	0	7,344	2,152	0	2,394	6,704	78	147	2,790	63	0	135	6	0	22,961	
June 6-June 19																		
Sample Number	0	83	2	524	190	0	141	315	9	6	123	3	0	8	1	0	1,405	
Percent	0.01	5.50	0.20	37.87	11.19	0.00	11.75	23.04	0.67	0.28	8.58	0.24	0.00	0.66	0.01	0.00	100.00	
Number	5	1,957	70	13,479	3,982	0	4,184	8,201	239	100	3,054	85	0	234	5	0	35,595	
June 20-June 26																		
Sample Number	1	158	1	657	252	0	178	438	15	11	175	5	0	12	2	1	1,906	
Percent	0.07	7.92	0.05	34.46	14.51	0.00	9.73	22.78	0.67	0.58	8.44	0.23	0.00	0.47	0.04	0.05	100.00	
Number	23	2,651	16	11,539	4,858	0	3,257	7,627	225	194	2,825	78	0	157	15	16	33,481	
June 27-July 3																		
Sample Number	1	121	1	517	218	0	143	360	12	12	108	3	1	3	0	0	1,500	
Percent	0.02	7.92	0.00	33.15	14.45	0.00	10.09	24.83	0.75	0.80	7.30	0.29	0.01	0.34	0.04	0.00	100.00	
Number	5	1,980	0	8,287	3,613	0	2,521	6,208	187	199	1,825	73	3	86	10	0	24,997	
July 4-July 10																		
Sample Number	0	107	4	403	168	1	217	261	4	12	58	1	0	9	0	0	1,245	
Percent	0.00	9.21	0.08	33.27	12.95	0.03	16.56	20.53	0.59	1.06	4.86	0.15	0.04	0.64	0.04	0.00	100.00	
Number	0	1,527	14	5,514	2,146	5	2,744	3,402	97	175	805	25	6	106	7	0	16,573	
July 11-July 17																		
Sample Number	0	167	9	391	214	0	135	274	11	14	40	4	1	2	0	0	1,262	
Percent	0.00	15.81	0.53	35.08	13.59	0.03	13.00	16.36	0.53	1.56	3.21	0.19	0.03	0.07	0.01	0.00	100.00	
Number	0	3,637	121	8,071	3,126	7	2,990	3,764	123	358	738	44	7	16	3	0	23,005	
July 18-July 24																		
Sample Number	0	236	11	569	241	0	209	256	6	13	48	2	0	3	0	0	1,594	
Percent	0.00	16.58	0.46	35.13	16.72	0.04	12.62	14.45	0.62	0.71	2.40	0.10	0.02	0.16	0.00	0.00	100.00	
Number	0	3,187	88	6,753	3,214	7	2,426	2,778	119	137	461	19	4	30	0	0	19,223	
July 25-July 28																		
Sample Number	0	331	1	513	279	1	106	240	6	3	31	1	0	1	0	1	1,514	
Percent	0.00	20.47	0.46	34.65	17.36	0.05	8.06	15.49	0.31	0.29	2.52	0.05	0.03	0.18	0.00	0.09	100.00	
Number	0	4,537	102	7,682	3,848	11	1,786	3,434	69	65	558	11	6	40	0	19	22,168	
Combined Period																		
May 15-July 28																		
Sample Number	2	1,338	29	4,617	1,869	2	1,428	3,156	76	87	1,067	27	2	60	5	2	13,767	
Percent	0.02	9.53	0.18	34.35	13.04	0.01	10.89	22.30	0.55	0.66	7.80	0.20	0.01	0.42	0.02	0.02	100.00	
Number	39	21,764	411	78,462	29,791	30	24,886	50,947	1,255	1,500	17,815	461	26	957	56	35	228,435	

Table 15. Chinook salmon harvest by brood year and age class in the commercial troll fishery in the Northern Outside area of Southeastern Alaska by period, 15 May to 28 July 1982.

	Brood Year and Age Class																
	1980	1979		1978			1977			1976				1975		1974	
Period	0.1	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	0.5	1.4	2.3	3.2	1.5	2.4	1.6	Total
May 15-May 29																	
Sample number	0	20	0	272	58	0	82	248	2	5	157	2	0	3	0	0	849
Percent	0.00	2.36	0.00	32.04	6.83	0.00	9.66	29.21	0.24	0.59	18.49	0.24	0.00	0.35	0.00	0.00	100.00
Number	0	418	0	5682	1212	0	1713	5181	42	104	3280	42	0	63	0	0	17736
May 30-June 5																	
Sample Number	0	43	0	304	60	0	115	266	2	8	114	3	0	5	0	0	920
Percent	0.00	4.67	0.00	33.04	6.52	0.00	12.50	28.91	0.22	0.87	12.39	0.33	0.00	0.54	0.00	0.00	100.00
Number	0	722	0	5103	1007	0	1930	4465	34	134	1914	50	0	84	0	0	15443
June 6-June 19																	
Sample Number	0	38	2	286	59	0	101	138	5	2	48	2	0	5	0	0	686
Percent	0.00	5.54	0.29	41.69	8.60	0.00	14.72	20.12	0.73	0.29	7.90	0.29	0.00	0.73	0.00	0.00	100.00
Number	0	1324	70	9961	2055	0	3518	4806	174	70	1672	70	0	174	0	0	23893
June 20-June 26																	
Sample Number	1	108	1	470	150	0	146	230	9	8	79	3	0	6	0	1	1212
Percent	0.08	8.91	0.08	38.78	12.38	0.00	12.05	18.98	0.74	0.66	6.52	0.25	0.00	0.50	0.00	0.08	100.00
Number	16	1711	16	7447	2377	0	2313	3644	143	127	1252	48	0	95	0	16	19203
June 27-July 3																	
Sample Number	0	61	0	264	86	0	87	146	5	8	47	2	0	3	0	0	709
Percent	0.00	8.69	0.00	37.24	12.13	0.00	12.27	20.59	0.71	1.13	6.63	0.28	0.00	0.42	0.00	0.00	100.00
Number	0	1215	0	5257	1712	0	1732	2907	100	159	936	40	0	60	0	0	14117
July 4-July 10																	
Sample Number	0	66	0	281	54	0	175	112	2	12	29	0	0	7	0	0	738
Percent	0.00	8.94	0.00	38.08	7.32	0.00	23.71	15.18	0.27	1.63	3.93	0.00	0.00	0.95	0.00	0.00	100.00
Number	0	843	0	3589	690	0	2235	1431	26	153	370	0	0	89	0	0	9426
July 11-July 17																	
Sample Number	0	94	3	235	48	0	99	70	1	14	18	1	0	0	0	0	583
Percent	0.00	16.12	0.51	40.31	8.23	0.00	16.98	12.01	0.17	2.40	3.09	0.17	0.00	0.00	0.00	0.00	100.00
Number	0	2363	75	5908	1207	0	2489	1760	25	352	453	25	0	0	0	0	14657
July 18-July 24																	
Sample Number	0	172	1	415	108	0	175	103	5	11	24	1	0	1	0	0	1016
Percent	0.00	16.93	0.10	40.85	10.63	0.00	17.22	10.14	0.49	1.08	2.36	0.10	0.00	0.10	0.00	0.00	100.00
Number	0	2029	12	4896	1274	0	2065	1215	59	130	283	12	0	12	0	0	11987
July 25-July 28																	
Sample Number	0	171	1	300	77	0	74	88	0	3	19	0	0	1	0	1	735
Percent	0.00	23.27	0.14	40.82	10.48	0.00	10.07	11.97	0.00	0.41	2.59	0.00	0.00	0.14	0.00	0.14	100.00
Number	0	3302	19	5793	1487	0	1429	1699	0	58	367	0	0	19	0	19	14194
Combined Period May 15-July 28																	
Sample Number	1	773	8	2827	700	0	1054	1401	31	71	535	14	0	31	0	2	7448
Percent	0.08	9.90	0.14	38.14	9.26	0.00	13.81	19.27	0.43	0.92	7.48	0.20	0.00	0.42	0.00	0.01	100.00
Number	16	13927	192	53645	13021	0	19424	27108	603	1278	10527	287	0	596	0	35	140656

Table 16. Chinook salmon harvest by brood year and age class in the commercial troll fishery in the Southern Outside area of Southeastern Alaska by period, 15 May to 28 July 1982.

Period	Brood Year and Age Class																Total
	1980	1979		1978		1977			1976				1975		1974		
	0.1	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	0.5	1.4	2.3	3.2	1.5	2.4	1.6	
May 15-June 12																	
Sample Number	0	60	0	376	113	0	83	274	7	1	105	1	0	5	0	0	1,025
Percent	0.00	5.85	0.00	36.68	11.02	0.00	8.10	26.73	0.68	0.10	10.24	0.10	0.00	0.49	0.00	0.00	100.00
Number	0	922	0	5,778	1,737	0	1,276	4,211	108	15	1,614	15	0	77	0	0	15,752
June 13-July 10																	
Sample Number	0	59	0	226	88	0	71	161	5	4	54	2	0	2	1	0	673
Percent	0.00	8.77	0.00	33.58	13.08	0.00	10.55	23.92	0.74	0.59	8.02	0.30	0.00	0.30	0.15	0.00	100.00
Number	0	1,284	0	4,920	1,916	0	1,546	3,505	109	87	1,176	44	0	44	22	0	14,651
July 11-July 28																	
Sample Number	0	133	5	193	105	0	49	97	7	0	11	0	0	1	0	0	601
Percent	0.00	22.13	0.83	32.11	17.47	0.00	8.15	16.14	1.16	0.00	1.83	0.00	0.00	0.17	0.00	0.00	100.00
Number	0	1,766	66	2,562	1,394	0	651	1,288	93	0	146	0	0	13	0	0	7,979
Combined Period May 15-July 28																	
Sample Number	0	252	5	795	306	0	203	532	19	5	170	3	0	8	1	0	2,299
Percent	0.00	10.35	0.17	34.55	13.15	0.00	9.05	23.46	0.81	0.27	7.65	0.15	0.00	0.35	0.06	0.00	100.00
Number	0	3,972	66	13,261	5,046	0	3,472	9,003	309	102	2,935	59	0	134	22	0	38,382

Table 17. Chinook salmon harvest by brood year and age class in the commercial troll fishery in the Northern Inside area of Southeastern Alaska by period, 15 May to 28 July 1982.

Period	Brood Year and Age Class																Total
	1980	1979		1978		1977			1976				1975		1974		
	0.1	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	0.5	1.4	2.3	3.2	1.5	2.4	1.6	
May 15-June 5																	
Sample number	0	30	0	145	54	0	27	173	2	2	94	2	0	9	2	0	540
Percent	0.00	5.56	0.00	26.85	10.00	0.00	5.00	32.04	0.37	0.37	17.41	0.37	0.00	1.67	0.37	0.00	100.00
Number	0	237	0	1,143	426	0	213	1,364	16	16	741	16	0	71	16	0	4,258
June 6-June 26																	
Sample Number	0	30	0	190	86	0	25	172	2	4	104	1	0	5	1	0	620
Percent	0.00	4.84	0.00	30.65	13.87	0.00	4.03	27.74	0.32	0.65	16.77	0.16	0.00	0.81	0.16	0.00	100.00
Number	0	344	0	2,181	987	0	287	1,974	23	46	1,193	11	0	58	11	0	7,116
June 27-July 17																	
Sample Number	0	55	0	239	141	0	51	338	10	2	62	4	1	1	1	0	905
Percent	0.00	6.08	0.00	26.41	15.58	0.00	5.64	37.35	1.10	0.22	6.85	0.44	0.11	0.11	0.11	0.00	100.00
Number	0	505	0	2,193	1,294	0	468	3,102	92	18	569	37	9	9	9	0	8,305
July 18-July 28																	
Sample Number	0	58	10	180	155	0	21	192	0	2	26	0	0	2	0	0	646
Percent	0.00	8.98	1.55	27.86	23.99	0.00	3.25	29.72	0.00	0.31	4.02	0.00	0.00	0.31	0.00	0.00	100.00
Number	0	423	73	1,313	1,131	0	153	1,401	0	15	190	0	0	15	0	0	4,713
Combined Period																	
May 15-July 28																	
Sample Number	0	173	10	754	436	0	124	875	14	10	286	7	1	17	4	0	2,711
Percent	0.00	6.19	0.30	28.00	15.73	0.00	4.60	32.14	0.53	0.39	11.04	0.26	0.04	0.63	0.15	0.00	100.00
Number	0	1,509	73	6,831	3,838	0	1,121	7,841	130	95	2,693	64	9	153	36	0	24,392

Table 18. Chinook salmon harvest by brood year age class in the commercial troll fishery in the Southern Inside area of Southeastern Alaska by period, 15 May to 28 July 1982.

Period	Brood Year and Age Class																Total
	1980	1979		1978		1977			1976				1975		1974		
	0.1	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	0.5	1.4	2.3	3.2	1.5	2.4	1.6	
May 15-July 3																	
Sample Number	1	36	0	139	177	0	26	225	4	1	66	1	0	2	1	0	679
Percent	0.15	5.30	0.00	20.47	26.07	0.00	3.83	33.14	0.59	0.15	9.72	0.15	0.00	0.29	0.15	0.00	100.00
Number	22	804	0	3,106	3,955	0	581	5,028	89	22	1,475	22	0	45	22	0	15,173
July 4-July 28																	
Sample Number	0	100	5	100	250	2	20	122	8	0	10	2	1	2	0	0	622
Percent	0.00	16.08	0.80	16.08	40.19	0.32	3.22	19.61	1.29	0.00	1.61	0.32	0.16	0.32	0.00	0.00	100.00
Number	0	1,581	79	1,581	3,952	32	316	1,928	126	0	158	32	16	32	0	0	9,832
Combined Period May 15-July 28																	
Sample Number	1	136	5	239	427	2	46	347	12	1	76	3	1	4	1	0	1,301
Percent	0.09	9.54	0.32	18.74	31.62	0.13	3.59	27.82	0.86	0.09	6.53	0.22	0.06	0.31	0.09	0.00	100.00
Number	22	2,385	79	4,687	7,907	32	897	6,956	216	22	1,633	54	16	76	22	0	25,005

Table 19. Chinook salmon length by brood year and age class in the commercial troll fishery in the Northern Outside area of Southeastern Alaska by period, 15 May to 28 July 1982.

Period	Brood Year and Age Class															
	1980		1979		1978			1977			1976			1975		1974
	0.1	1.0	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	0.5	1.4	2.3	1.5	2.4	1.6
May 15-May 29																
Sample Size	0	0	20	0	275	58	0	82	252	0	5	3	0	3	0	0
Mean Length	0.00	0.00	650.6	0.00	762.3	673.8	0.00	870.6	773.1	0.00	940.6	886.2	0.00	983.3	0.00	0.00
Standard Error	0.00	0.00	7.62	0.00	5.15	6.61	0.00	8.57	5.66	0.00	21.54	6.21	0.00	33.83	0.00	0.00
95% LCI	0.00	0.00	634.6	0.00	752.2	660.6	0.00	853.5	762.0	0.00	880.7	874.1	0.00	837.9	0.00	0.00
95% UCI	0.00	0.00	666.5	0.00	772.3	687.0	0.00	887.6	784.2	0.00	1000.5	898.4	0.00	1128.8	0.00	0.00
May 30-June 5																
Sample Size	0	0	43	0	272	60	0	115	266	2	8	114	3	5	0	0
Mean Length	0.00	0.00	650.4	0.00	749.1	672.2	0.00	862.6	772.8	675.0	904.5	866.5	856.7	939.6	0.00	0.00
Standard Error	0.00	0.00	5.60	0.00	4.14	6.83	0.00	6.25	4.78	5.00	27.09	5.94	81.66	16.83	0.00	0.00
95% LCI	0.00	0.00	661.7	0.00	741.0	658.5	0.00	850.4	763.4	611.5	840.6	854.9	505.5	892.8	0.00	0.00
95% UCI	0.00	0.00	670.6	0.00	757.2	685.9	0.00	874.9	782.2	738.5	968.4	878.2	1207.8	986.4	0.00	0.00
June 6- June 19																
Sample Size	0.00	0.00	38	2	289	89	0.00	102	141	5	2	50	2	5	0.00	0.00
Mean Length	0.00	0.00	667.3	585.0	754.4	690.5	0.00	860.1	797.3	760.0	945.0	880.1	812.5	893.0	0.00	0.00
Standard Error	0.00	0.00	7.80	15.00	3.34	6.18	0.00	5.83	6.08	36.91	15.00	10.61	2.50	23.80	0.00	0.00
95% LCI	0.00	0.00	651.4	394.4	747.9	678.1	0.00	848.7	784.4	657.4	754.4	858.8	780.7	826.8	0.00	0.00
95% UCI	0.00	0.00	683.1	775.7	761.0	702.8	0.00	871.6	809.3	862.6	1135.7	901.4	844.3	959.2	0.00	0.00
June 20-June 26																
Sample Size	0.00	0.00	108	0.00	478	151	0.00	148	232	9	8	81	3	6	0.00	0.00
Mean Length	0.00	0.00	666.3	0.00	763.6	692.4	0.00	852.3	807.8	711.1	908.8	872.9	890.0	964.2	0.00	0.00
Standard Error	0.00	0.00	4.44	0.00	3.29	4.24	0.00	5.16	4.66	21.34	15.20	9.43	36.17	32.49	0.00	0.00
95% LCI	0.00	0.00	657.6	0.00	757.2	684.1	0.00	842.2	798.7	661.8	873.0	854.1	734.5	880.7	0.00	0.00
95% UCI	0.00	0.00	675.0	0.00	770.1	700.7	0.00	862.4	817.0	760.4	944.6	891.7	1045.5	1047.8	0.00	0.00
June 27-July 3																
Sample Size	0.00	0.00	61	0.00	265	86	0.00	87	146	5	8	47	0.00	3	0.00	0.00
Mean Length	0.00	0.00	661.5	0.00	769.4	681.4	0.00	861.6	787.0	690.0	856.1	869.7	0.00	933.3	0.00	0.00
Standard Error	0.00	0.00	4.02	0.00	3.56	4.77	0.00	6.98	6.04	17.39	26.47	11.31	0.00	38.44	0.00	0.00
95% LCI	0.00	0.00	653.4	0.00	762.4	671.9	0.00	847.7	775.2	641.7	793.7	846.8	0.00	768.0	0.00	0.00
95% UCI	0.00	0.00	669.5	0.00	776.4	690.9	0.00	875.5	798.8	738.4	918.6	892.5	0.00	1098.6	0.00	0.00

-Continued-

Table 19. Chinook salmon length by brood year and age class in the commercial troll fishery in the Northern Outside area of Southeastern Alaska by period, 15 May to 28 July 1982 (continued).

Period	Brood Year and Age Class															
	1960		1979		1978			1977			1976			1975		1974
	0.1	1.0	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	0.5	1.4	2.3	1.5	2.4	1.6
July 4-July 10																
Sample Size	0.00	0.00	66	0.00	281	54	0.00	175	112	2	12	29	0.00	7	0.00	0.00
Mean Length	0.00	0.00	669.0	0.00	784.4	705.9	0.00	873.8	825.0	696.5	891.7	906.3	0.00	915.6	0.00	0.00
Standard Error	0.00	0.00	4.51	0.00	3.68	7.30	0.00	3.83	6.71	8.50	12.10	14.14	0.00	15.43	0.00	0.00
95% LCI	0.00	0.00	659.9	0.00	777.2	691.2	0.00	866.3	811.8	588.5	865.1	877.3	0.00	877.8	0.00	0.00
95% UCI	0.00	0.00	678.0	0.00	791.7	720.6	0.00	881.3	838.1	804.5	918.3	935.3	0.00	953.4	0.00	0.00
July 11-July 17																
Sample Size	0.00	0.00	94	3	235	48	0.00	99	70	0.00	14	18	0.00	0.00	0.00	0.00
Mean Length	0.00	0.00	658.4	595.0	778.0	701.4	0.00	867.2	780.7	0.00	909.3	890.1	0.00	0.00	0.00	0.00
Standard Error	0.00	0.00	3.16	21.79	3.73	8.84	0.00	6.44	9.37	0.00	3.49	13.50	0.00	0.00	0.00	0.00
95% LCI	0.00	0.00	652.1	501.3	770.7	683.5	0.00	854.4	762.0	0.00	880.1	861.6	0.00	0.00	0.00	0.00
95% UCI	0.00	0.00	664.7	688.7	785.3	719.2	0.00	879.9	799.5	0.00	938.4	919.6	0.00	0.00	0.00	0.00
July 18-July 24																
Sample Size	0.00	0.00	173	0.00	422	108	0.00	178	103	5	11	25	0.00	0.00	0.00	0.00
Mean Length	0.00	0.00	662.9	0.00	779.5	696.5	0.00	877.4	789.4	696.0	935.0	855.6	0.00	0.00	0.00	0.00
Standard Error	0.00	0.00	2.30	0.00	2.76	4.34	0.00	3.86	7.68	11.77	13.57	15.88	0.00	0.00	0.00	0.00
95% LCI	0.00	0.00	658.4	0.00	774.1	688.0	0.00	869.9	774.4	663.3	904.7	822.9	0.00	0.00	0.00	0.00
95% UCI	0.00	0.00	667.4	0.00	784.9	705.0	0.00	885.0	804.5	728.7	965.3	888.3	0.00	0.00	0.00	0.00
July 25-July 28																
Sample Size	0.00	0.00	171	0.00	300	77	0.00	74	88	0.00	3	19	0.00	0.00	0.00	0.00
Mean Length	0.00	0.00	664.2	0.00	782.8	686.1	0.00	876.3	742.8	0.00	848.3	865.2	0.00	0.00	0.00	0.00
Standard Error	0.00	0.00	2.69	0.00	3.26	6.15	0.00	6.54	8.16	0.00	76.72	12.79	0.00	0.00	0.00	0.00
95% LCI	0.00	0.00	659.0	0.00	776.4	673.9	0.00	863.2	726.6	0.00	518.4	838.3	0.00	0.00	0.00	0.00
95% UCI	0.00	0.00	669.5	0.00	789.2	698.3	0.00	889.4	759.1	0.00	1178.2	892.0	0.00	0.00	0.00	0.00

Table 20. Chinook salmon length by brood year and age class in the commercial troll fishery in the Southern Outside area of Southeastern Alaska by period, 15 May to 28 July 1982.

Period	Brood Year and Age Class															
	1980		1979		1978			1977			1976			1975		1974
	0.1	1.0	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	0.5	1.4	2.3	1.5	2.4	1.6
<u>May 15-June 12</u>																
Sample Size	0.00	0.00	60	0.00	376	113	0.00	83	274	7	0.00	105	0.00	5	0.00	0.00
Mean Length	0.00	0.00	661.3	0.00	751.6	677.1	0.00	853.3	799.3	707.9	0.00	900.1	0.00	968.0	0.00	0.00
Standard Error	0.00	0.00	6.69	0.00	3.18	4.74	0.00	7.12	4.58	11.80	0.00	8.81	0.00	13.66	0.00	0.00
95% LCI	0.00	0.00	647.9	0.00	745.3	667.8	0.00	839.0	790.3	679.0	0.00	882.8	0.00	930.0	0.00	0.00
95% UCI	0.00	0.00	674.7	0.00	757.8	686.4	0.00	867.4	808.2	736.8	0.00	917.3	0.00	1006.0	0.00	0.00
<u>June 13-July 10</u>																
Sample Size	0.00	0.00	59	0.00	226	88	0.00	71	161	5	4	54		2	0.00	0.00
Mean Length	0.00	0.00	661.7	0.00	775.9	674.1	0.00	867.1	817.6	701.6	762.5	912.2	750.0	910.0	0.00	0.00
Standard Error	0.00	0.00	4.42	0.00	4.56	5.02	0.00	9.02	5.99	35.50	47.85	10.71	100.00	10.00	0.00	0.00
95% LCI	0.00	0.00	653.0	0.00	766.9	664.1	0.00	849.1	805.8	602.9	610.3	890.6		782.9	0.00	0.00
95% UCI	0.00	0.00	670.6	0.00	784.8	684.1	0.00	885.2	829.4	800.3	914.7	933.7		1037.1	0.00	0.00
<u>July 11-July 28</u>																
Sample Size	0.00	0.00	122	5	172	83	0.00	68	6	0.00	4	0.00	0.00	0.00	0.00	0.00
Mean Length	0.00	0.00	670.2	651.6	778.8	692.3	0.00	782.5	812.5	0.00	895.0	0.00	0.00	0.00	0.00	0.00
Standard Error	0.00	0.00	4.29	11.23	5.58	5.89	0.00	9.55	13.02	0.00	16.83	0.00	0.00	0.00	0.00	0.00
95% LCI	0.00	0.00	661.8	620.4	767.9	680.6	0.00	763.4	779.0	0.00	841.5	0.00	0.00	0.00	0.00	0.00
95% UCI	0.00	0.00	678.6	682.9	789.7	704.0	0.00	801.6	846.0	0.00	948.5	0.00	0.00	0.00	0.00	0.00

Table 21. Chinook salmon length by brood year and age class in the commercial troll fishery in the Northern Inside area of Southeastern Alaska by period, 15 May to 28 July 1982.

Period	Brood Year and Age Class															
	1980		1979		1978			1977			1976			1975		1974
	0.1	1.0	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	0.5	1.4	2.3	1.5	2.4	1.6
<u>May 15-June 5</u>																
Sample Size	0.00	0.00	30	0.00	145	54	0.00	27	173	0.00	0.00	94	0.00	9	0.00	0.00
Mean Length	0.00	0.00	655.6	0.00	723.3	672.5	0.00	852.7	749.2	0.00	0.00	837.1	0.00	905.6	0.00	0.00
Standard Error	0.00	0.00	6.67	0.00	5.71	5.98	0.00	12.63	5.65	0.00	0.00	11.89	0.00	13.67	0.00	0.00
95% LCI	0.00	0.00	642.0	0.00	712.1	660.5	0.00	826.7	738.1	0.00	0.00	813.4	0.00	874.0	0.00	0.00
95% UCI	0.00	0.00	669.2	0.00	734.5	684.6	0.00	878.7	760.3	0.00	0.00	860.7	0.00	937.2	0.00	0.00
<u>June 6-June 26</u>																
Sample Size	0.00	0.00	30	0.00	189	86	0.00	25	169	2	4	103	0.00	5	0.00	0.00
Mean Length	0.00	0.00	650.2	0.00	713.1	669.3	0.00	845.5	738.2	756.0	868.0	928.7	0.00	867.4	0.00	0.00
Standard Error	0.00	0.00	5.97	0.00	4.45	5.62	0.00	16.32	5.63	6.00	53.92	1.69	0.00	35.38	0.00	0.00
95% LCI	0.00	0.00	638.0	0.00	704.4	658.1	0.00	811.9	727.1	679.7	696.5	805.8	0.00	769.1	0.00	0.00
95% UCI	0.00	0.00	662.4	0.00	721.8	680.5	0.00	879.1	749.2	732.3	1039.5	851.6	0.00	965.8	0.00	0.00
<u>June 27-July 17</u>																
Sample Size	0.00	0.00	55	0.00	239	141	0.00	51	338	10	0.00	62	0.00	0.00	0.00	0.00
Mean Length	0.00	0.00	654.4	0.00	730.3	655.9	0.00	868.6	721.6	664.4	0.00	835.2	0.00	0.00	0.00	0.00
Standard Error	0.00	0.00	8.07	0.00	4.31	4.83	0.00	11.00	6.66	16.08	0.00	12.89	0.00	0.00	0.00	0.00
95% LCI	0.00	0.00	638.2	0.00	721.9	646.4	0.00	846.5	708.5	628.2	0.00	809.5	0.00	0.00	0.00	0.00
95% UCI	0.00	0.00	670.5	0.00	738.8	665.4	0.00	890.7	734.6	700.8	0.00	861.0	0.00	0.00	0.00	0.00
<u>July 18-July 28</u>																
Sample Size	0.00	0.00	55	10	180	155	0.00	21	192	0.00	0.00	26	0.00	2	0.00	0.00
Mean Length	0.00	0.00	636.2	616.1	742.8	659.7	0.00	859.3	740.8	0.00	0.00	824.9	0.00	1068.5	0.00	0.00
Standard Error	0.00	0.00	11.94	5.87	6.49	9.52	0.00	18.60	6.44	0.00	0.00	14.95	0.00	7.50	0.00	0.00
95% LCI	0.00	0.00	612.3	580.2	730.0	641.0	0.00	820.4	728.1	0.00	0.00	794.1	0.00	973.2	0.00	0.00
95% UCI	0.00	0.00	660.1	652.0	755.5	678.3	0.00	898.2	753.4	0.00	0.00	855.7	0.00	1163.8	0.00	0.00

Table 22. Chinook salmon length by brood year and age class in the commercial troll fishery in the Southern Inside area of Southeastern Alaska by period, 15 May to 28 July 1982.

	Brood Year and Age Class															
	1980		1979		1978			1977			1976			1975		1974
Period	0.1	1.0	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	0.5	1.4	2.3	1.5	2.4	1.6
May 15-July 3																
Sample Size	0	0	36	0	139	177	0	26	225	4	0	66	0	0	0	0
Mean Length	0.00	0.00	655.6	0.00	722.3	667.9	0.00	846.7	762.8	630.0	0.00	883.5	0.00	0.00	0.00	0.00
Standard Error	0.00	0.00	5.05	0.00	5.43	5.23	0.00	12.69	4.99	7.91	0.00	8.09	0.00	0.00	0.00	0.00
95% LCI	0.00	0.00	645.4	0.00	711.7	657.6	0.00	820.6	753.0	604.9	0.00	867.3	0.00	0.00	0.00	0.00
95% UCI	0.00	0.00	665.9	0.00	733.0	678.1	0.00	872.9	772.6	655.1	0.00	899.7	0.00	0.00	0.00	0.00
July 4-July 28																
Sample Size	0	0	100	5	100	250	2	20	122	8	0	10	2	0	0	0
Mean Length	0.00	0.00	666.8	564.0	756.3	670.4	647.5	822.7	794.7	694.4	0.00	837.1	867.5	0.00	0.00	0.00
Standard Error	0.00	0.00	5.23	44.84	6.68	2.87	7.50	18.02	6.71	12.37	0.00	33.97	22.50	0.00	0.00	0.00
95% LCI	0.00	0.00	656.5	439.3	743.0	664.8	425.1	785.0	781.5	665.2	0.00	760.3	581.5	0.00	0.00	0.00
95% UCI	0.00	0.00	677.2	688.7	769.5	576.0	869.9	860.4	807.8	723.6	0.00	913.9	1153.5	0.00	0.00	0.00

apparent in average length data. Length is more dependent upon ocean age than on freshwater age, however, age 1. fish were larger on the average than age 0. fish for a given ocean age.

Seine. Because only 1,000 scales which could be aged were collected from the seine fishery (mostly from District 104), we could stratify by neither area or time. The number and percent of chinook salmon scales aged by district was; 7 (.7%) District 101, 14 (1.4%) District 102, 927 (92.7%) District 104, and 52 (5.2%) District 110/111 combination.

Most (79.2%) of the samples from the seine fishery were age 0. (Table 23). Age 0.3 was the dominant age class, representing 35.8% of all followed by age 0.2 at 29.3% of the sample. Age 1.3 chinook salmon were the most prevalent age 1. fish but they only accounted for 8.4% of the sample. Less than 1.0% of the fish were age 2.

The mean length, standard error, and 95% confidence bounds for chinook salmon sampled from the seine fishery is presented in Table 24. The mean length of age 1. fish was greater than age 0. fish for a given age class.

Gillnet. Insufficient samples were available to stratify age composition by district or time for the gillnet fishery. The number and percent of chinook salmon aged by district for the gillnet fisheries was; 83 (18.1%) District 101, 9 (2.0%) District 106, 360 (78.6%) District 111, and 6 (1.3%) District 115. Most (84.5%) of the chinook salmon in the sample had one freshwater annuli (Table 23). Age 1.2 chinook salmon were the dominant age class (45.0%) followed by age 1.3 fish (21.8%) and age 1.4 fish (15.5%). The mean length, standard error, and 95% confidence bounds for chinook salmon sampled from the gillnet fishery is presented in Table 24. The fish harvested by the seine fishery tended to be larger at each age than those harvested by the gillnet fishery.

Escapement Data

There are 33 known chinook salmon producing rivers in Southeastern Alaska, three are considered major producers with a current or potential production of 10,000 or more fish in the run, 8 are considered medium producers (1,500 to 10,000 fish), and 22 are considered minor producers (less than 1,500 fish) (ADF&G 1982). Nine index rivers are surveyed annually by Paul Kissner (ADF&G, Sport Fish Division) to obtain peak escapement estimates for chinook salmon. The nine index river systems include the three major producers (Alsek, Taku, and Stikine), the five medium producers (Situk, Unuk, Chickamin, Blossom, Keta), and one minor producer (King Salmon).

The escapement counts for all rivers surveyed for chinook salmon in 1982 are presented along with estimates of the total chinook salmon escapement to the nine index systems and the entire Southeastern region. Age, sex, and size composition data for 10 natural and 3 hatchery runs is also presented.

Numbers of Fish:

A total of 6,625 chinook salmon was counted in the Stikine River system and 5,072 chinook salmon were counted in the Taku River system. These two rivers accounted

Table 23. Chinook salmon harvest by brood year and age class for the Southeastern Alaska commercial purse seine and gillnet fisheries, 1982.

Fishery	Brood Year and Age Class																Total
	1980		1979		1978			1977			1976			1975		1974	
	0.1	1.0	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	0.5	1.4	2.3	1.5	2.4	1.6	
Purse Seine ¹ (June 27-Oct 16)																	
Sample number	2	1	293	11	358	73	1	130	84	8	9	27	2	1	0	0	1000
Percent	0.20	0.10	29.30	1.10	35.80	7.30	0.10	13.00	8.40	0.80	0.90	2.70	0.20	0.10	0.00	0.00	100.00
Number	63	31	9194	345	11233	2291	31	4079	2636	251	282	847	63	31	0	0	31377
Gillnet ² (June 6-Oct 23)																	
Sample number	0	0	35	10	25	206	1	5	100	2	0	71	0	2	1	0	458
Percent	0.00	0.00	7.64	2.18	5.46	44.98	0.22	1.09	21.83	0.44	0.00	15.50	0.00	0.44	0.22	0.00	100.00
Number	0	0	1241	354	886	7302	35	177	3545	71	0	2517	0	71	35	0	16234

¹ The number of chinook salmon aged by district from the seine fishery was; 7 District 101, 14 District 102, 927 District 104, and 52 District 110 and 111 combined.

² The number of chinook salmon aged by district from the gillnet fishery was; 83 District 101, 9 District 106, 360 District 111, and 6 District 115.

Table 24. Chinook salmon length by brood year and age class in the commercial purse seine and gillnet fisheries in Southeastern Alaska, 1982.

Fishery	Brood Year and Age Class															
	1980		1979		1978			1977			1976			1975		1974
	0.1	1.0	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	0.5	1.4	2.3	1.5	2.4	1.6
Purse Seine																
Sample Size	2	0	293	11	358	73	0	130	84	8	9	27	0	0	0	0
Mean Length	373.5	0.00	677.0	464.9	811.3	677.6	0.00	892.2	827.1	750.0	911.1	915.1	0.00	0.00	0.00	0.00
Standard Error	10.50	0.00	2.69	27.57	3.15	9.33	0.00	5.97	8.38	29.23	21.32	16.49	0.00	0.00	0.00	0.00
95% LCI	240.1	0.00	671.7	403.4	805.1	658.9	0.00	880.5	810.4	681.0	861.9	881.1	0.00	0.00	0.00	0.00
95% UCI	507.0	0.00	677.2	526.4	819.5	696.3	0.00	903.9	843.8	819.0	960.4	949.0	0.00	0.00	0.00	0.00
Gillnet																
Sample Size	0	0	35	10	25	206	0	5	100	0	0	71	0	0	0	0
Mean Length	0.00	0.00	616.3	505.6	733.4	590.5	0.00	779.0	720.0	0.00	0.00	881.5	0.00	0.00	0.00	0.00
Standard Error	0.00	0.00	12.35	15.75	20.06	3.86	0.00	49.38	7.56	0.00	0.00	9.23	0.00	0.00	0.00	0.00
95% LCI	0.00	0.00	591.3	470.0	791.0	582.9	0.00	641.7	705.0	0.00	0.00	863.1	0.00	0.00	0.00	0.00
95% UCI	0.00	0.00	641.4	541.2	775.9	598.1	0.00	916.3	734.9	0.00	0.00	900.0	0.00	0.00	0.00	0.00

for 39.9 and 30.6% of all the chinook salmon counted in Southeastern Alaska escapements in 1982.

Surveys by aerial, foot, and boat surveys provided indices of peak escapement for 68 spawning areas in Southeastern Alaska in 1982 (Table 25). Weirs were used to count the escapement returning to two natural runs (Andrew Creek and Cripple Creek) and three hatchery runs (Ketchikan Creek, Crystal Creek, and Sashin Creek). The survey data must be used with caution since the proportion of the total run observed within each river varies and is not known. One and two ocean jack¹ chinook salmon are usually not counted in the aerial surveys because their smaller size and light coloration makes them difficult to see.

The peak escapement counts obtained during repeat helicopter surveys (Table 25) show peak of spawning in the Chilkat River (Stonehouse Creek and Big Boulder Creek) to be in early August, in the Taku River system (Nakina River, Kowatua Creek, Tatsamenie River, Nahlin River, Tseta Creek, and Dudidontu River) to be from late July to mid-August, in the Stikine River system (Little Tahltan River, Tahltan River, and Beatty Creek) to be in late July and early August, and in the Unuk River system (Unuk River, Clear Creek, Sawmill Slough, and Eulachon River) the Chickamin River, Blossom River, and the Keta River to be in mid-August. This run timing data suggests that spawning is progressively later for the more southern runs.

The total estimated chinook salmon escapement to all Southeastern Alaska natural runs was 47,437 fish (Table 26) based on expanded counts from the nine index rivers. The estimated escapement to the three major producing systems was 30,212 fish, to the eight medium producing systems was 8,117 fish, and to the 22 minor producing systems was 9,108 fish. Again, these estimates should not be treated as precise estimates but are useful in accessing the interannual variability and distribution of the runs.

Age, Sex, and Size:

Age 1.4 and 1.3 predominated in the escapements of wild run chinook salmon (Table 27). Only 6 of the 2,232 chinook salmon sampled (0.3%) from these runs were age 0. Returns to Alaskan hatcheries consisted of both age 0. and 1. chinook salmon.

From the length at age data in Table 28 we see that most of the wild run females matured at age 1.4 while most of the males matured at ages 1.3 and 1.4. The three ocean females tended to be longer than the three ocean males and the four and five ocean males were longer than the four and five ocean females.

DISCUSSION

Stock Composition

Results of this and previous studies (Kissner 1973 and 1980, McBride and Wilcock 1983, Van Alen and Marshall 1983) has shown that virtually all wild run chinook

¹ Precocious fish (usually male) that mature early after limited time in marine waters and, therefore, are of small size.

Table 25. Peak escapement estimates and weir counts for chinook salmon in South-eastern Alaska, 1982. Abbreviations for types of surveys are: (A) aerial (fixed wing), (B) boat, (F) foot, (H) helicopter, and (W) weir.

Stream Number	Stream Name	Count	(Method)	Date	Organization
101-30-030	Keta River	754	(H)	8/13	ADF&G ¹
101-30-060	Martin River	75	(F)	8/30	ADF&G
101-45-078	Carroll River	17	(W)	8/17	SSRAA ²
101-45-025	Ketchikan Creek	80	(W)	8/13	ADF&G
101-55-020	Wilson River	300	(B)	9/4	ADF&G
101-55-040	Blossom River	345	(B)	8/13	ADF&G
101-60-025	Valentine Creek	2	(F)	9/14	ADF&G
101-60-030	Big Goat Creek	15	(F)	8/13	ADF&G
101-71-004	Chickamin River	306	(H)	8/13	ADF&G
101-71-006	Clear Creek	33	(H)	8/13	ADF&G
101-71-008	Bumpy Creek	37	(F)	9/9	ADF&G
101-71-014	King Creek	165	(F)	8/15	ADF&G
101-71-016	Choca Creek	1	(F)	9/9	ADF&G
101-71-025	Walker Cove	1	(F)	8/15	ADF&G
101-71-028	Walker Creek	2	(F)	9/16	ADF&G
101-71-063	Portage Creek	18	(F)	9/9	ADF&G
101-75-	Gene's Lake Creek	329	(F)	8/12	ADF&G
101-75-005	Herman Creek	28	(F)	9/10	ADF&G
101-75-010	Grant Creek	33	(F)	9/10	ADF&G
101-75-015	Eulachon River	384	(H)	8/13	ADF&G
101-75-016	Sawmill Slough	28	(H)	8/13	ADF&G
101-75-017	Clear Creek (Unuk)	24	(H)	8/13	ADF&G
101-75-030	Lake Creek	48	(H)	8/13	ADF&G
101-75-050	Klahini River	79	(F)	8/17	ADF&G
101-75-085	Indian Creek	30	(F)	8/5	ADF&G
101-75-300	Cripple Creek (Unuk)	538	(F)	8/4	ADF&G
106-44-031	Crystal Creek	1,088	(W)	10/22	ADF&G
107-40-024	Aaron Creek	1	(A)	8/4	ADF&G
107-40-025	Oerns Creek	2	(A)	7/7	ADF&G
107-40-047	Tom Lake Creek	2	(B)	8/31	ADF&G
107-40-049	Harding River	8	(A)	7/26	ADF&G
107-40-055	Eagle River (Bradfield)	4	(F)	8/31	ADF&G
108-40-010	North Arm Creek	138	(F)	8/11	ADF&G
108-40-016	Kikahe River	23	(F)	8/15	ADF&G
108-40-017	Goat Creek	39	(F)	8/16	ADF&G
108-40-018	Shuktusa Branch	8	(F)	8/14	ADF&G
108-40-019	Andrews Slough	1	(F)	8/24	ADF&G
108-40-020	Andrews Creek	1,053	(W)	8/21	ADF&G
108-40-024	Government Creek	14	(F)	8/27	ADF&G
108-40-13A	West of Hot Springs	188	(F)	8/16	ADF&G
108-70-011	Katete River	16	(A)	8/12	ADF&G
108-70-075	Craig River	4	(A)	8/12	ADF&G
108-70-077	Craig River (USA)	5	(A)	8/12	ADF&G
108-80-002	Stikine River	5	(F)	7/30	Aq. Env. ³
108-80-065	Kirk Creek	3	(F)	8/11	Aq. Env.
108-80-075	Yehiniko Creek	1	(F)	7/29	Aq. Env.
108-80-080	Shakes Creek	39	(F)	8/6	Aq. Env.
108-80-094	Dojatin Creek	1	(F)	7/28	Aq. Env.
108-80-100	Tahltan River	1,690	(F)	8/5	ADF&G
108-80-115	Beatty Creek	567	(H)	7/28	ADF&G
108-80-120	Little Tahltan River	2,830	(H)	8/5	ADF&G
109-10-006	Sashin Creek	909 ⁴	(W)	8/22	NMFS ⁵
110-14-007	Farragut River	49	(A)	8/20	ADF&G
110-32-009	Chuck River	80	(A)	7/27	ADF&G
110-34-003	Rusty River	4	(A)	8/20	ADF&G
111-17-010	King Salmon River	259	(H)	7/20	ADF&G
111-32-210	King Salmon Creek	125	(F)	7/26	ADF&G
111-32-220	Nakina River	2,533	(H)	7/30	ADF&G
111-32-240	Kowatua Creek	289	(H)	8/14	ADF&G
111-32-255	Tatsamenie River	387	(H)	8/14	ADF&G
111-32-270	Nahlin River	1,246	(H)	7/21	ADF&G
111-32-275	Tseta Creek	228	(H)	7/25	ADF&G
111-32-280	Dudidontu River	130	(H)	7/28	ADF&G
112-65-024	Greens Creek	1	(F)	8/9	ADF&G
114-33-023	Neka River	2	(F)	8/11	ADF&G
115-32-046	Klenini River	3	(A)	9/16	ADF&G
115-32-054	Big Boulder Creek	56	(H)	8/9	ADF&G
115-32-057	31 Mile Creek	3	(A)	9/16	ADF&G
115-32-301	Stonehouse Creek	123	(H)	8/3	ADF&G
182-30-010	Klukshu River (Alsek)	2,369	(W)	10/21	ADF&G
182-70-010	Situk River	611	(W)	8/24	ADF&G

¹ Alaska Department of Fish and Game

² Southern Southeast Regional Aquaculture Association

³ Aquatic Environment, Canada

⁴ National Marine Fisheries Service

⁵ Includes 762 jacks, precocious males who had spent one or two years in the ocean.

Table 26. Estimated total escapement of chinook salmon to Southeastern Alaska natural runs, 1982.

System/ Tributary	Index Escapement	Tributary Expansion Factor	Aerial Survey Expansion Factor	System Total Escapement	Category Expansion Factor	Total Escapement
<u>Major Systems (3 Total)</u>						
Alsek/Kluckshu	2,369 ¹	1/.64	1	3,702		
Taku/Nakina, Nahlin	3,779	1/.60	1/.75	8,398		
Stikine/Little Tahltan	2,830	1/.25	1/.625	18,112		
Major Systems Subtotals:				30,212	1	30,212
<u>Medium Systems (8 Total)</u>						
Situk	611	1	1	611		
Unuk	1,351	1	1/.625	2,162		
Chickamin	339	1	1/.625	542		
Blossom	345	1	1/.625	552		
Keta	754	1	1/.625	1,206		
Medium Systems Subtotals:				5,073	8/5	8,117
<u>Minor Systems (22 Total)</u>						
King Salmon	259	1	1/.625	414		
Minor Systems Subtotals:				414	22/1	9,108
Total All Systems:						47,437

¹ Weir count.

Table 27. Age composition of chinook salmon sampled from escapements to South-eastern Alaska and Canada, 1982.

System (Stream Number)	Brood Year and Age Class															
	1980		1979		1978			1977			1976			1975		Total
	1.0	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	0.5	1.4	2.3	1.5	2.4		
Wild Runs																
Keta River 101-30-030	N %				1 4.35		1 4.35	8 34.78		13 56.52					23 100.00	
Carroll River 101-45-078	N %		1 6.67	3 20.00		4 26.67		1 6.67		6 40.00					15 100.00	
Cripple Creek 101-75-030	N %			4 12.50		3 9.38		7 21.88		18 56.25					32 100.00	
Sitkine River (Kahlan) 108-40	N %			2 33.33				1 16.67		3 50.00					6 100.00	
North Arm Creek 108-40-010	N %				1 8.33			5 41.67		6 50.00					12 100.00	
Andrews Creek 108-40-020	N %			5 1.52	1 0.30	21 6.38	2 0.61	44 13.37		248 75.38			8 2.43		329 100.00	
Tahltan River 108-80-100	N %			2 1.05		4 2.11		28 14.74		143 75.26			13 6.84		190 100.00	
Little Tahltan River 108-80-120	N %			3 0.80		11 2.95		63 16.89		292 78.28			4 1.07		373 100.00	
Nakina River 111-32-220	N %			205 19.02		177 16.42	3 0.28	1 0.09	228 21.15	2 0.19	442 41.00	5 0.46	14 1.30	1 0.09	1,078 100.00	
Nahlin River 111-32-270	N %	2 1.15		1 0.57		4 2.30			24 13.79		143 82.18				174 100.00	
Total Number		2	1	225	1	226	3	4	409	2	1314	5	39	1	2,232	
Total Percent		0.09	0.05	10.08	0.05	10.13	0.13	0.18	18.32	0.09	58.87	0.22	1.75	0.05	100.00	
Hatchery Runs																
Ketchikan Creek ¹ 101-47-025	N %			23 8.04		211 73.78		52 18.18							286 100.00	
Crystal Creek ² 106-44-031	N %		4 2.01	60 30.15	2 1.01	1 0.50	47 23.62			85 42.71					199 100.00	
Sashin Creek ³ 109-10-006	N %				2 3.47	28 19.44	13 9.03	44 30.56			54 37.50				144 100.00	
Total Number			4	83	7	240	60	96		85	54				629	
Total Percent			0.64	13.19	1.11	38.16	9.54	15.26		12.51	8.59				100.00	

¹ Deer Mountain Hatchery returns, ADF&G.

² Crystal Lake Hatchery returns, ADF&G.

³ Little Port Walter Hatchery returns, ADF&G.

Table 28. Mean length by sex and age group of chinook salmon from escapements to Southeastern Alaska and Canada, 1982.

System (Stream Number)		Brood Year and Age Class														
		1980		1979		1978			1977			1976			1975	
		1.0	0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	0.5	1.4	2.3	1.5	2.4	
Wild Runs																
Keta River 101-30-030	Males	X 95% CI N														
	Females	X 95% CI N						650 114.98 7			649.6 88.9 9					
Carroll River 101-45-078	Males	X 95% CI N		447.8 12.47 3		512.5 7.5 2										
	Females	X 95% CI N									835.8 19.34 6					
Cripple Creek 101-75-030	Males	X 95% CI N		371.3 16.59 4				896.7 9.27 3			967.0 19.53 5					
	Females	X 95% CI N									884.1 20.25 11					
Sitkine River (Kakwan) 108-40	Males	X 95% CI N		420.0 10.00 2							795.0 5.00 2					
	Females	X 95% CI N														
North Arm Creek 108-40-010	Males	X 95% CI N									617.5 209.34 4					
	Females	X 95% CI N						386.0 158.03 5			877.5 32.50 2					
Andrews Creek 108-40-020	Males	X 95% CI N		377.0 16.02 5		557.6 12.67 21		699.6 15.66 25			863.9 8.01 84			905.0 55.00 2		
	Females	X 95% CI N						778.2 11.23 19			854.0 4.32 163			875.0 24.19 6		
Tahltan River 108-80-100	Males	X 95% CI N		339.0 1.00 2		490.3 59.56 4		791.4 18.34 17			917.1 12.38 56					
	Females	X 95% CI N						823.8 16.63 11			856.7 4.90 85			913.0 18.47 7		

-Continued-

Table 28. Mean length by sex and age group of chinook salmon from escapements to Southeastern Alaska and Canada, 1982 (continued).

Little Tahltan River 108-80-120	Males	X	343.3	596.0	769.9	905.3	990.7		
		95% CI	8.81	18.99	11.50	5.72	15.27		
		N	3	10	35	28	6		
	Females	X			784.3	856.2	918.3		
		95% CI			9.36	3.91	7.26		
		N			28	154	3		
Nakina River 111-32-220	Males	X	326.7	526.5	743.8	905.5	989.2		
		95% CI	2.37	5.09	6.36	5.07	17.24		
		N	250	177	168	196	6		
	Females	X		360.0	776.7	873.0	801.0	926.3	
		95% CI		28.43	5.67	22.50	3.62	36.55	17.39
		N		3	60	2	246	5	8
Nohlin River 111-32-270	Males	X		578.8	820.0	927.8			
		95% CI		10.87	30.06	13.60			
		N		4	7	29			
	Females	X			799.7	860.3			
		95% CI			10.98	4.55			
		N			17	114			
Hatchery Runs									
Ketchikan Creek ¹ 101-47-025	Males	X	469.4	722.7	888.9				
		95% CI	12.11	5.03	17.79				
		N	23	192	19				
	Females	X		743.2	864.9				
		95% CI		11.50	13.08				
		N		19	33				
Crystal Creek ² 106-44-031	Males	X	530.8		762.6	868.9			
		95% CI	31.94		18.32	12.91			
		N	4		20	31			
	Females	X	425.7		786.6	849.6			
		95% CI	5.61		10.28	7.14			
		N	60		27	54			
Sashin Creek ³ 109-10-006	Males	X	826.0	643.9	588.7	723.0	1002.2		
		95% CI	16.00	27.13	294.33	54.09	14.36		
		N	2	26	3	21	17		
	Females	X	812.3	764.5	837.0	829.9	929.3		
		95% CI	28.32	28.50	11.78	7.44	10.85		
		N	3	2	10	23	37		

¹ Deer Mountain Hatchery returns, ADF&G.

² Crystal Lake Hatchery returns, ADF&G.

³ Little Port Walter Hatchery returns, ADF&G.

salmon originating in Southeastern Alaska smolt during their second (age 1.) or third year (age 2.). Because we also have estimates of the contribution by age class made by Alaskan hatcheries to the fisheries of Southeastern in 1982, and an estimate of the harvest of fish aged 0., we can develop an estimate of the contribution of stocks aged 0. originating from outside Alaska.

The total commercial harvest of chinook salmon during the 1982 summer troll, seine, and gillnet fisheries was 276,046, of which an estimated 153,806 were age 0. Based on recoveries of coded microwire tags, Crystal Lake Hatchery contributed 173 and Little Port Walter Hatchery contributed 65 age 0. fish, for a total of 238 (see Van Alen, Marshall, and Funk 1983). While we recognize that Alaska's wild stocks contributed some age 0. to the 1982 harvest (0.3% of all samples collected from Alaskan escapements were aged 0.), the low incidence of this age class in the escapement samples, coupled with relatively low abundance of spawners lend us to conclude that ignoring the contribution of these fish would result in insignificant bias. Therefore, we conclude that approximately 153,568 age 0. chinook salmon of non-Alaskan origin were harvested by the summer troll, purse seine, and gillnet fisheries during 1982, this represents 55.6% of the total harvest. In addition we can conclude from age composition data (Rogers et al, 1983) that most of the age 1.4 and 1.5 fish harvested in Southeastern originated from Alaskan or British Columbia runs north of the Fraser River. Further stock composition estimates for the age 1. component (122,240 fish) are not available at this time, however the use of scale patterns in a discriminant function offers promise (Van Alen and Marshall 1983).

Age Composition

There were differences in the age composition of chinook salmon harvested by the different gear types. The majority of troll caught fish in the summer fishery were age 0.3 (33.5%) and age 1.3 (22.9%), the majority of seine caught fish were age 0.3 (35.8%) and age 0.2 (29.3%), and the majority of gillnet fish were age 1.2 (45.0%) and age 1.3 (21.8%). In total, age 0. fish comprised 54.3% of the troll harvest, 79.2% of the seine harvest, and 15.5% of the gillnet harvest (Figure 2). The total number of age 0. chinook salmon harvested from the summer troll fishery was 126,651 fish, from the seine fishery was 24,851 fish, and from the gillnet fishery was 2,304 fish.

The age 0. fish comprised different proportions of the harvest in different times and areas. The proportion of age 0. fish in the Southeastern Alaska summer troll harvest increased through time from a low of 45% the first period (15 May to 29 May) to a high of 63 to 65% the last three periods of 11 July to 28 July (Figure 3). The Northern and Southern Outside areas had the highest proportion of age 0. fish (Figure 4).

The seasonal decline in percent of age 1.3 and 1.4 fish in the summer troll harvest (Tables 14 to 18, Figure 5) represents immigration of these fish out of the fishery and toward their natal streams. Since age 1.4 fish predominated in the 1982 Alaskan returns and were less numerous in non-Alaskan returns (Rogers et al. 1983) the large decline in harvest of this group after the 27 June to 3 July period largely reflects the immigration of these fish to Alaskan escapements. The peak passage in early July of chinook salmon past the lower Stikine River Canadian commercial gillnet fishery (Table 12) coincides with this drop in harvest of age 1.4 fish.

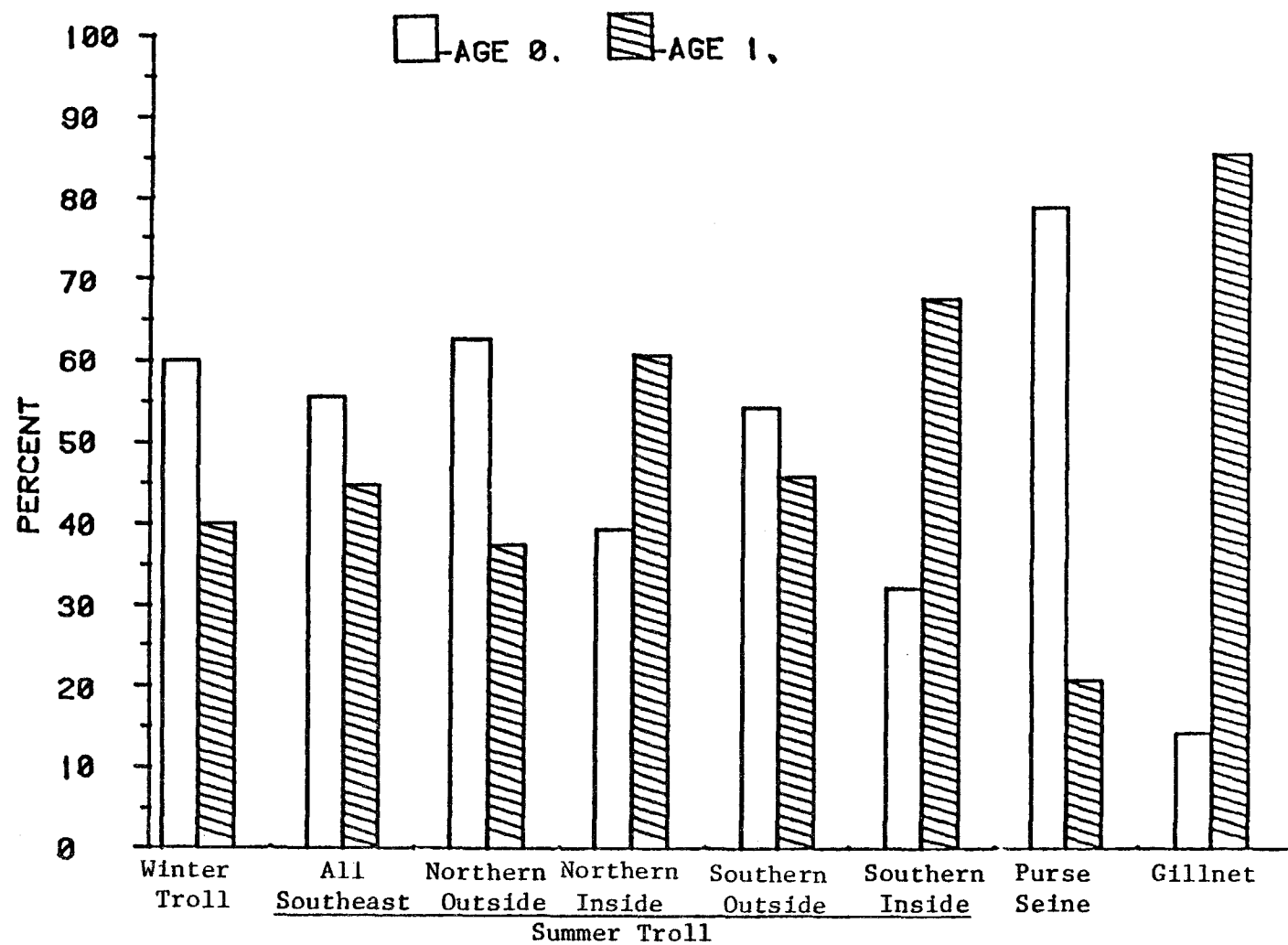


Figure 2. Percent of age 0. and age 1. chinook salmon harvested in the Southeastern Alaska troll, seine, and gillnet fisheries, 1982.

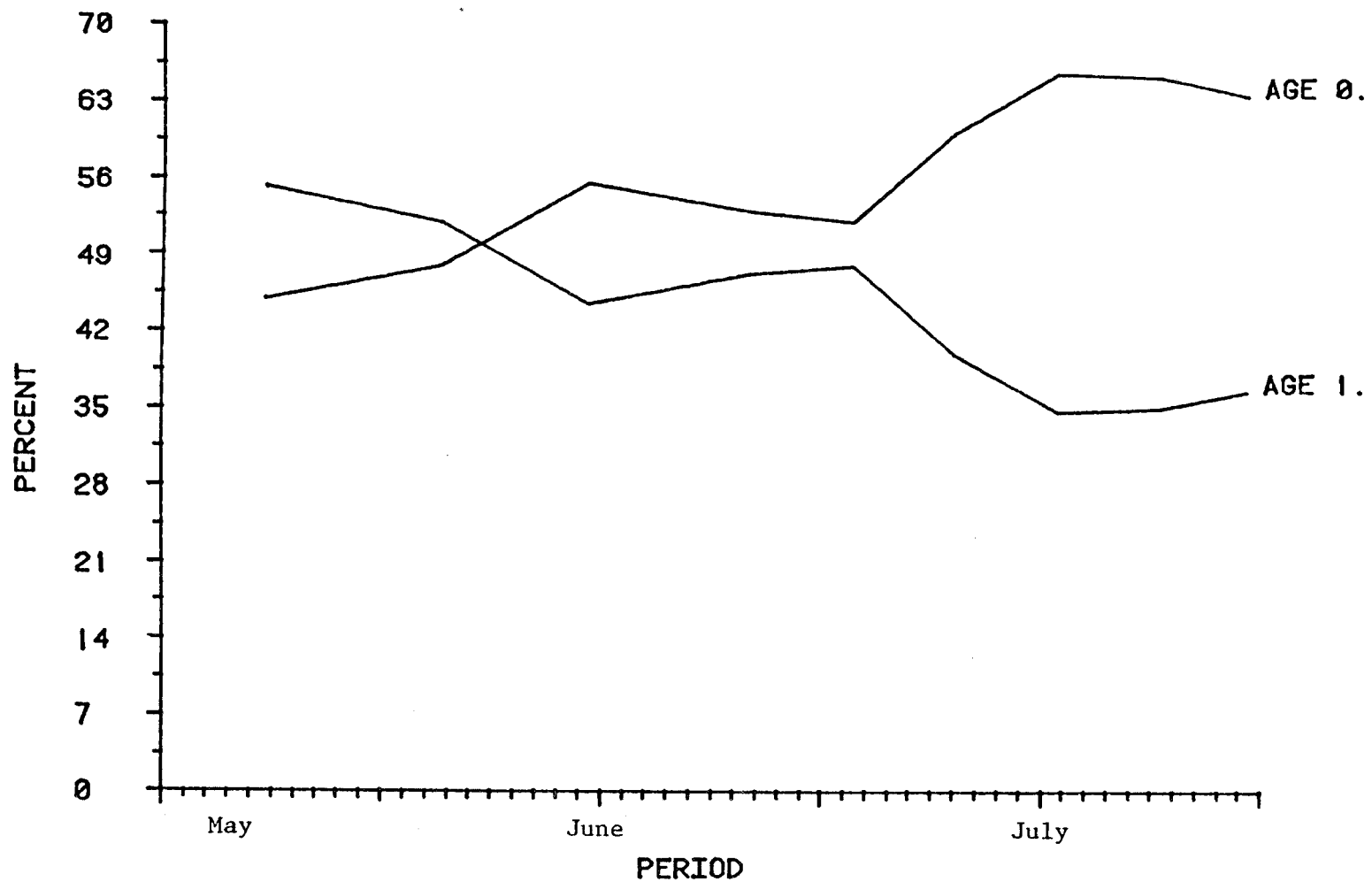


Figure 3. Percent of age 0. and age 1. chinook salmon harvested through time in the Southeastern Alaska summer troll fishery, 1982.

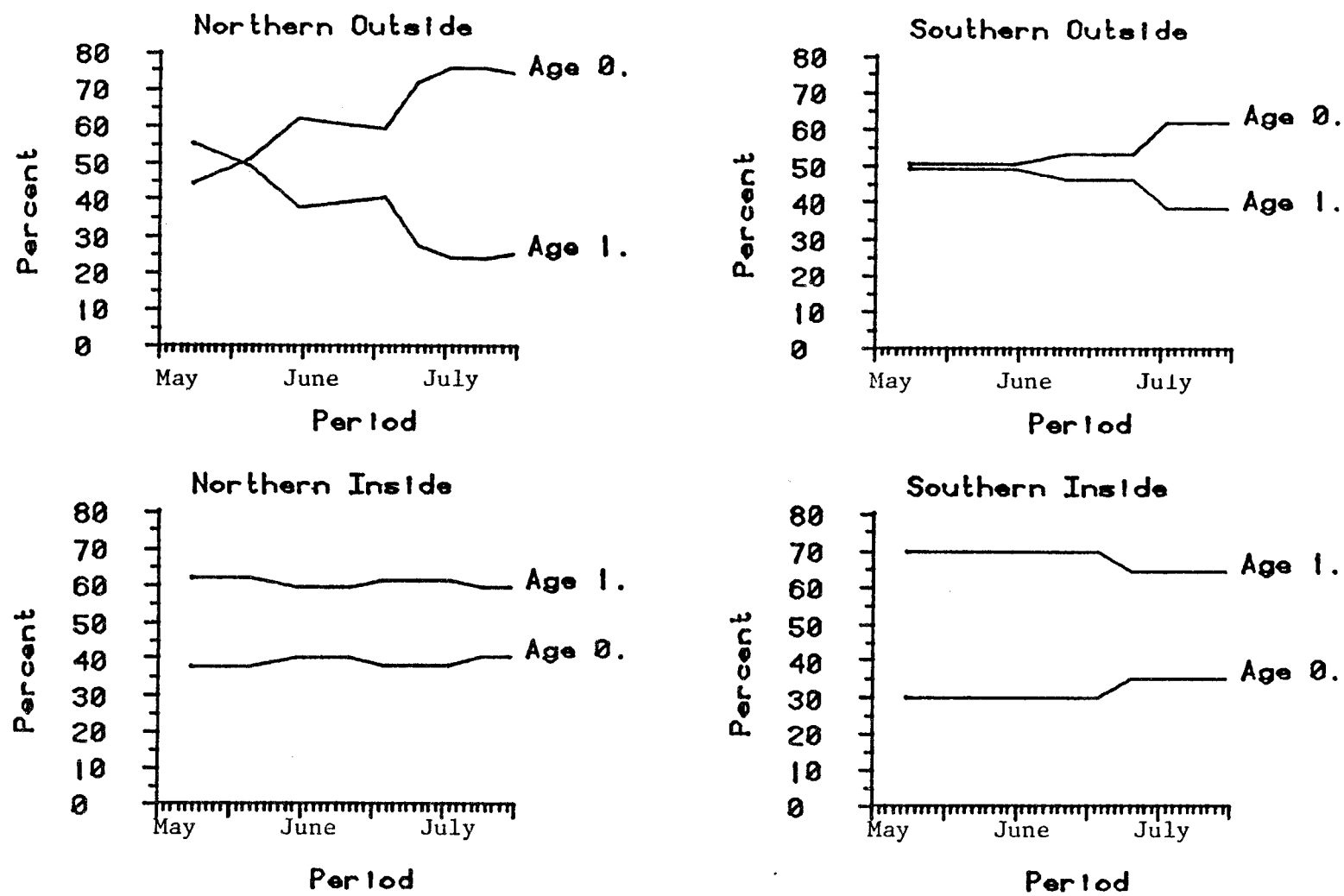


Figure 4. Percent of age 0. and age 1. chinook salmon harvested through time by area in the Southeastern Alaska summer troll fishery, 1982.

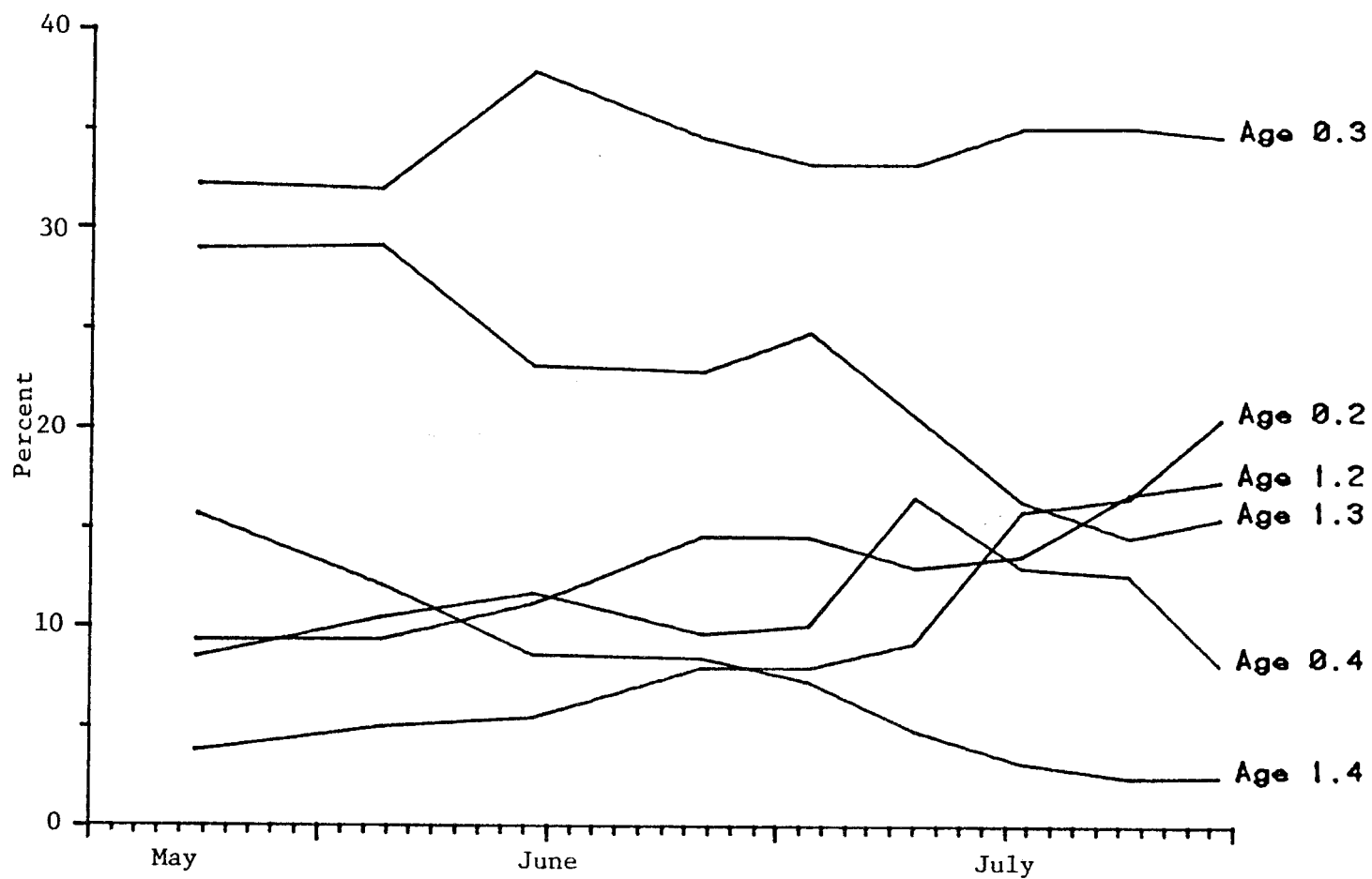


Figure 5. Percent of each age class of chinook salmon harvested through time in the Southeastern Alaska summer troll fishery, 1982.

The seasonal increase in age 0.2 and 1.2 fish in the summer troll fishery represent recruitment of these fish into the fishery. These age classes were being recruited to the fishery throughout the summer fishery (Figure 5).

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